Phoenix DEM

User Guide

Version 6.7

DCN: PhUser-05212015

SoleraTec

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Introduction

We welcome you to SoleraTec's Phoenix DEM, version 6.7.

SoleraTec is in the business of data management and can effectively address storage needs for digital data assets.

With the SoleraTec solution, digital data assets are captured or ingested into the management solution's Information Repository, where they are stored under complete control, can be searched on, and retrieved with the highest original quality. Depending on the scope of your working environment, the Information Repository is made up of one Vault or many Vaults on your network; each Vault contains a central processing unit (CPU), Phoenix DEM software, and storage.

The Phoenix DEM solution is unique and outstanding compared to any storage management systems because of:

- **Decentralized Vaults** -Your Information Repository is distributed over your network. This offers you a dynamic, server-less solution with a "no single point of failure" where you can get to your data quickly and easily, at any time.
- **Scalable solution** - Rather than having one giant expensive storage unit, you can easily add storage space incrementally as your business grows and your data requirements increase. This promotes significant cost savings, as you can add less expensive storage units.
- **Multi-tiered storage** - Different types of storage units can be integrated into the solution at different times. This supports long-term retention needs and unlimited retention possibilities.
- **Online, near-line, and offline communication** - Low resolution companion or proxy files are created and completely managed by Phoenix DEM. These proxy files are stored locally but always teamed with high resolution originals, making it possible for thorough, worthwhile searches throughout your entire Information Repository. Phoenix DEM provides fast retrieval of original video or files, even if the media is stored offline.

Phoenix DEM - Evidentiary File Management

Phoenix DEM manages video, audio, data files, disk image, and other digital assets for long-term retention, replication, and review. Because of its versatility, Phoenix DEM helps eliminate silos of digital evidence. It can store most non-proprietary public surveillance video, interrogation room audio/video recordings, and in-car camera video, as well as 911 audio files and uploads from smart phones. Phoenix DEM makes it easy for investigators and prosecutors to make the case, by presenting all digital evidence in one place using one interface screen.

Phoenix DEM makes it effortless to locate an individual file or discover collective sets of data related to a particular subject. Simple queries can be built around file attributes. More complex queries can be defined using ownership, subject, and source information as well as content keywords and phrases, and file attribute information. A full suite of boolean operators and wildcard options are available to refine the search even further. Search queries can be constrained to specific storage locations, or they can be defined to span the entire Phoenix DEM Information Repository.

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Phoenix DEM manages a multi-tiered solution, meaning that it has a scalable architecture and can manage multiple storage devices. Digital Evidence is active and available whether files are located online, near-line, or offline.

From ingesting your data with Target and Process, searching for and retrieving stored files using Search and Retrieve, and reviewing the digital evidence with the Digital Evidence Manager, you will find that with Phoenix DEM all your data management needs are met with ease.

See also Architectural Overview and Technical Overview.

Seamless Integration

Seamless integration refers to the ease at which Phoenix DEM handles all your data asset management needs. From file ingest, to online, near-line, or offline storage, to retrieving data for review or manipulation on your desktop client, all your data - regardless of when it was ingested or where stored - are under complete management and are easily accessible.

Phoenix DEM has a scalable, multi-tiered infrastructure, where it can manage multiple storage devices across a network for the most affordable long-term retention available. The following is an example of a complete digital data asset and video lifecycle management solution.

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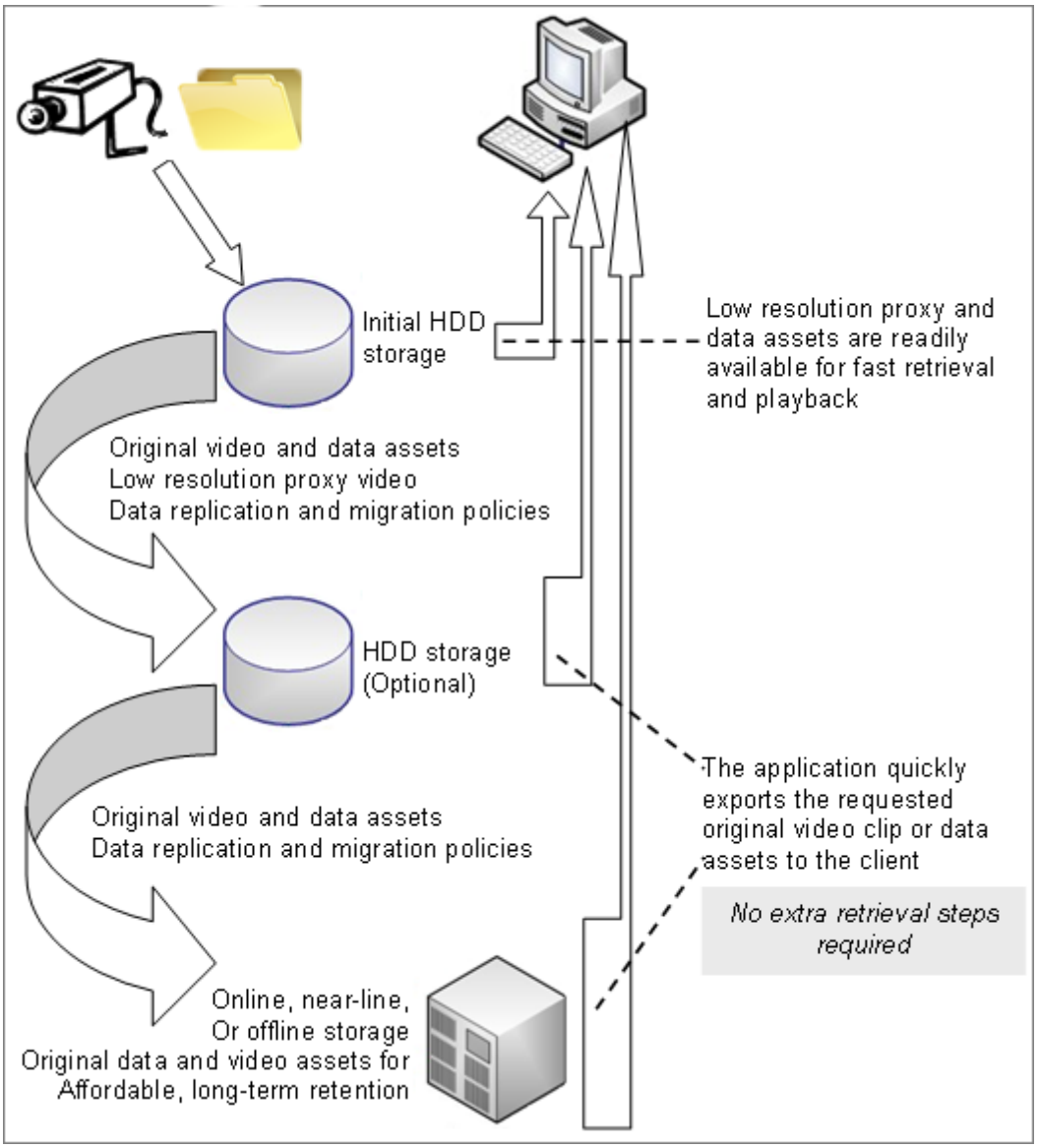
Initial HDD storage
Low resolution proxy and data assets are readily available for fast retrieval and playback
Original video and data assets
Low resolution proxy video
Data replication and migration policies
HDD storage (Optional)
The application quickly exports the requested original video clip or data assets to the client
Original video and data assets
Data replication and migration policies
No extra retrieval steps required
Online, near-line, Or offline storage
Original data and video assets for Affordable, long-term retention

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SoleraTec LLC

Website: www.SoleraTec.com

E-mail: sales@SoleraTec.com

Phone: 760.743.7200 Ext.109

Address: 2430 Auto Park Way Suite 205, Escondido, CA 92029

Documentation Overview

Notes about this guide

Screenshots - The screenshots in this guide are taken from a Windows operating system. Depending on the operating system you are running, the appearance of the applications may vary slightly, but the functionality is the same.

If viewing Help online, click a screenshot image to enlarge the display, and then click again to return its display to original size.

Blue Text - Blue text that is a topic heading can be clicked to expand for details when Help is being viewed online. Other blue text can be clicked to follow a link to another page in Help or to a website.

Symbols - This guide uses icon symbols to easily identify information.

= Indicates a useful tip.

= Indicates a warning statement.

Path names - The sample paths in this guide are for a Windows operating system. Depending on the operating system you are running, use the appropriate naming convention.

Paths for hard disk media, log files, and miscellaneous directories are case sensitive on non-Windows computers. Unless otherwise noted, when searching for a file or when creating a Vault, values typed are not case sensitive but are case preserving (the application ignores the case).

When entering paths, only use the forward slash (/) as a path name delimiter. You may get unexpected results if a backslash is used.

Privileged Users - Privileged users have rights to override security in the application as it relates to Phoenix DEM resources (media, stored data, vault operations), but do not have rights to override local computer security. The following are privileged users:

- Windows "Administrators" group
- Windows "Backup Operators" group
- Windows "Domain Administrator" user
- Windows "Domain Admins" group
- POSIX "root" user (UID:0)
- POSIX "root" group (GID:0)

Unsupported naming conventions in Windows - Some Windows applications create filenames with characters that are unreadable by Windows Explorer. These files are also unreadable by Phoenix DEM clients.

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Note - All features and functions discussed in this guide may not be available for your version of Phoenix DEM.

Hardware and Software Requirements

To deliver advanced data management for Windows, Mac, Linux, and mixed environments, be sure to have at least the minimum or better of the following system requirements.

- Processes do not run optimally if hardware does not meet or exceed requirements.
- The interface appearance varies slightly depending on the platform used. For example, where a Window's menu displays **Exit**, a Mac menu displays **Quit**.

Regardless of your operating system, a keyboard, monitor, and mouse pointer is needed to properly run the software. If you are using a single-button mouse, press CTRL and click where the documentation states right-click.

Windows

Server

Windows Requirements: Windows Server 2003 SP2; Windows XP SP3; Windows Vista SP2 (32-bit and 64-bit); Windows 7 SP1 (32-bit and 64-bit); Windows Server 2008 SP1 (32-bit and 64-bit); Windows Server 2008 R2 SP1; Windows 8 (32-bit and 64-bit); Windows 8.1 (32-bit and 64-bit); Windows Server 2012 (32-bit and 64-bit), Windows Server 2012 R2 (64-bit).

Processor Requirements: Intel i5 Core 3.00 GHz or better.

Hard Drive Requirements: 20 GB of available space to install and run the product.

Memory Requirements: 8 GB of RAM.

Third party Requirements: Latest version of Apple QuickTime 7 and supported codecs to allow playing of the video with which you are working. **Supported audio codecs:** X-QT, X-QUICKTIME, PCMU, GSM, PCMA, MPEG4-GENERIC, MP4A-LATM. **Supported video codecs:** X-QT, X-QUICKTIME, H263-1998, H263-2000, H264, MP4V-ES.

Client

Windows Requirements: Windows Server 2003 SP2; Windows XP SP3; Windows Vista SP2 (32-bit and 64-bit); Windows 7 SP1 (32-bit and 64-bit); Windows Server 2008 SP1 (32-bit and 64-bit); Windows Server 2008 R2 SP1; Windows 8 (32-bit and 64-bit); Windows 8.1 (32-bit and 64-bit); Windows Server 2012 (32-bit and 64-bit), Windows Server 2012 R2 (64-bit).

Processor Requirements: Intel Dual Core 2.20 GHz or better.

Hard Drive Requirements: 10 GB of available space to install and run the product.

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Memory Requirements: 4 GB of RAM.

Third party Requirements: Latest version of Apple QuickTime 7 and supported codecs to allow playing of the video with which you are working. **Supported audio codecs:** X-QT, X-QUICKTIME, PCMU, GSM, PCMA, MPEG4-GENERIC, MP4A-LATM. **Supported video codecs:** X-QT, X-QUICKTIME, H263-1998, H263-2000, H264, MP4V-ES.

Mac

Server

Apple Requirements: Mac OS X 10.8.5 or newer.

Processor Requirements: Intel i5 Core 3.00 GHz or better.

Hard Drive Requirements: 20 GB of available space to install and run the product.

Memory Requirements: 8 GB of RAM.

Third party Requirements: Latest version of Apple QuickTime 7 and supported codecs to allow playing of the video with which you are working. **Supported audio codecs:** X-QT, X-QUICKTIME, PCMU, GSM, PCMA, MPEG4-GENERIC, MP4A-LATM. **Supported video codecs:** X-QT, X-QUICKTIME, H263-1998, H263-2000, H264, MP4V-ES.

Client

Apple Requirements: Mac OS X 10.8.5 or newer.

Processor Requirements: Intel i3 Core 2.00 GHz or better.

Hard Drive Requirements: 10 GB of available space to install and run the product.

Memory Requirements: 4 GB of RAM.

Third party Requirements: Latest version of Apple QuickTime 7 and supported codecs to allow playing of the video with which you are working. **Supported audio codecs:** X-QT, X-QUICKTIME, PCMU, GSM, PCMA, MPEG4-GENERIC, MP4A-LATM. **Supported video codecs:** X-QT, X-QUICKTIME, H263-1998, H263-2000, H264, MP4V-ES.

Linux

Server

Linux Requirements: Red Hat 7.2 or newer; Fedora Core 12 or newer.

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Processor Requirements: Intel Dual Core 2.20 GHz or better.

Hard Drive Requirements: 20 GB of available space to install and run the product.

Memory Requirements: 4 GB of RAM.

Third party Requirements: None.

Client

Linux Requirements: Red Hat 7.2 or newer; Fedora Core 12 or newer.

Processor Requirements: Intel Pentium IV 3.40 GHz or better.

Hard Drive Requirements: 10 GB of available space to install and run the product.

Memory Requirements: 2 GB of RAM.

Third party Requirements: None.

Network

Multicast packet routing is required between all server and client machines.

Vault Disk Storage

Disk-only: Vault Storage is required on all servers. In case of disk-only configurations, sufficient storage must be provided to store all assets.

Disk and Digital Data Tape: In a mixed storage environment of disk and digital data tape, sufficient disk storage must be provided to store assets for period which it is required to be stored on disk.

Database Disk Storage

Database storage requirements vary based on the amount of stored assets and the use of metadata. Each server has its own database which correlates to the assets it is storing. As a guideline, every 16 TB assets storage will require 10 GB of disk storage as a minimum for the database.

For assistance in determining the amount of storage needed, please consult your Phoenix DEM sales agent.See also Installation and Product Licensing.

Product Licensing

Get started with Phoenix DEM by purchasing a product license. You can purchase a regular licensed product online or download a trial version from SoleraTec's website.

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Product License

Product licensing is based on storage capacity. Each Vault within your Information Repository requires at least one license.

All licenses for your product are tied to one computer where you can have one or many licenses to use for a single storage device. If you have a multi-tiered storage architecture, licenses are still tied to each computer on the network. Available licensed uses include: Data Service Policies, Vault platform devices, video post production, or archive.

Run as many Phoenix DEM software clients as you need on the network at no additional charge.

Evaluation License

Phoenix DEM comes with a fully functional seven day evaluation license. At the end of the trial period you can either request an extended license or purchase a regular license through the same channels.

If you run the software longer than seven days with an evaluation license, your Vaults will shut down. Until a license is purchased and added, the Vaults run in increments of only two hours.

Your licenses are managed through Vault Admin. To activate or add a license, see Vault Properties License tab.

Architectural Overview

SoleraTec's Phoenix DEM specializes in data storage and the management of your digital data assets. The data can be anything from document files to video files.

Phoenix DEM answers the call to your needs of:

- "I want to store data"
- "I want to move data around on my network"
- "I want to bring data back from storage to review or use"

This is not a disjointed system of data collection and then backup storage. It is a digital asset management solution which seamlessly integrates your data from file ingest, to storage, and then immediate data retrieval - regardless of when or where stored.

The following diagram provides an overview of Phoenix DEM's architecture, illustrating how the different components of your solution work together. You can see how your digital data assets are captured or ingested into your Information Repository and are under complete management and never out of reach. Your assets can be searched on, moved around to different Vaults on the network, and retrieved in original quality for you to use.

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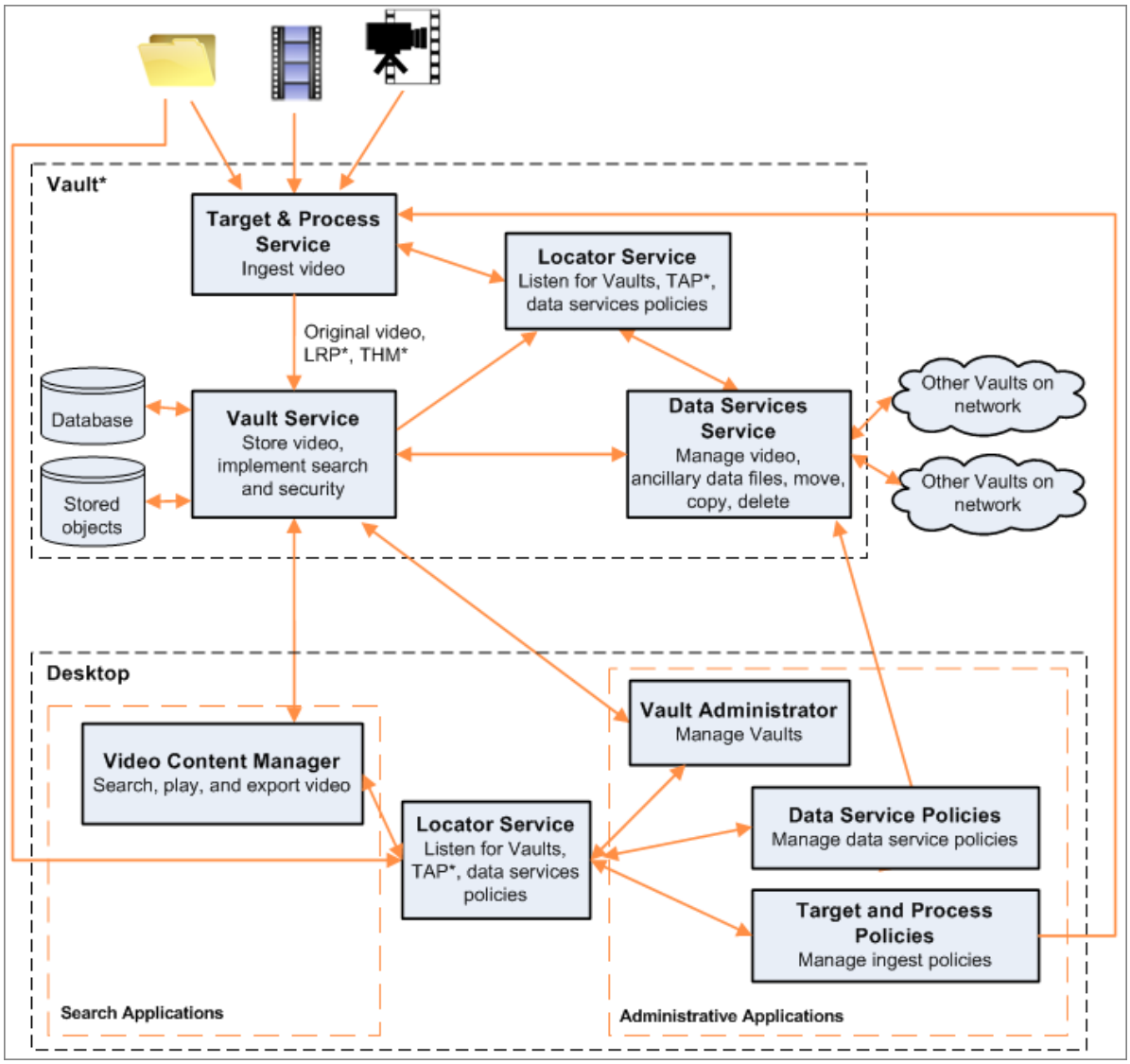

***Vault - Central processing unit, software, and storage device.**

***TAP - Target and Process.**

***THM - Thumbnail file.**

***LRP - Low resolution companion/proxy video.**

Information Repository

The Information Repository is where data is stored. Since a Vault is a storage device used to store files, the Information Repository is made up of all the clients and Vaults on your network. The Information Repository can take many different forms depending on your needs and system, but it is flexible, easy to deploy, and is an active multi-tiered storage environment.

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In the Information Repository, data storage resources are virtualized as composite storage sets and operate as a federated environment. They can be comprised of a mixed set of networked data storage technologies running on Windows, Mac, Linux, and in mixed computing environments. If using Network Attached Storage (NAS) devices, then the Information Repository is all the networked units.

The Word about Policies

Phoenix DEM employs the use of "policies" in most of its applications. They are the method outlined by parameters and options for managing all your digital assets effectively. As the user, you own the benefit of creating, customizing and executing these policies to fit your environment and workflow.

For more information see Technical Overview.

Technical Overview

To use Phoenix DEM effectively, it is useful to understand its different components and how they interoperate to create a federated Information Repository. Phoenix DEM's balanced, extended client/server design provides advantages over technologies that rely on a client/server, client, or server component to drive and manage operations.

In a typical client/server model, clients are hard-coded to specific servers and cannot be changed without some manual interaction. Our extended client/server architecture includes a Locator Service, which dynamically locates and uses any storage resource available on the network as needed. This design proves advantageous over a traditional client/server model as it includes:

- **Automatic fail-over** - If there is more than one Vault available, clients can divide their use of the available Vaults. Clients fail-over from the current Vault in use to another Vault, should the current Vault fail.
- **Dynamic resource allocation** - Any network computer with Phoenix DEM installed can access storage resources on the network. An Information Repository can be comprised of many storage devices, based on whatever storage media and drive technology you want. Flexible parameters are configurable to send stored data to different storage devices based on the storage performance and longevity requirements. For more information see Locator Service.
- **Load balancing** - This is the distribution of jobs and data throughout the Information Repository. Phoenix DEM queries each Vault regarding the best match for processing requirements, storage resources, free space, and then establishes a connection to the Vault and copies files to the Vault. The network remains load balanced.

Vault

The Vault concept makes the SoleraTec product unique and powerful. A Vault can be thought of as a storage container. On the server side, a Vault is comprised of a central processing unit (CPU), Phoenix DEM software, and storage. Each Vault requires its own product key because of its scalable possibilities.

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The Vault(s) on the network make up the Information Repository to manage all your data storage needs. The Vaults have attributes associated to them like licensing, media, and files, and are easy to upgrade. They are decentralized, making the Information Repository a distributed solution across your network - but overall data management remains centralized and under complete control. Phoenix DEM is truly a multi-tiered storage and digital asset management solution. For more information see Vault Admin.

Components

Phoenix DEM includes server components and client components.

During the installation process you can opt to install the server or client but it is important to note that clients do not function unless a Phoenix DEM server has been installed on the network. For more information see Installation.

Server

The server contains all the applications found in the client component, plus Vaults and administrative tools.

Server Vault applications are:

- **Vault Service** - The Vault service manages the Vault(s) on the network. The Vault uses storage space in a hierarchical manner, where each level is unique and features its own access control list and other parameters. This allows for load balancing, automatic fail-over, and for media to be targeted granularly for specific uses and across multiple devices.
- **Data Services Service** - Use to create policies for complete data lifecycle management in the Information Repository. This service provides an easy way to migrate, replicate, or purge data between Vaults and ensure that data is preserved or maintained on media within a storage hierarchy.
- **Target and Process Service** - This service ingests data into the Information Repository and metadata is extracted from the data and cataloged in databases.
- **Add Remove Vault Wizard** - Use to add or remove a hard disk Vault, shadow hard disk Vault, standalone data tape Vault, or a data tape library Vault.

With the server set up, you can optionally select the following server administration tools:

- **Vault Admin** - Prepare media and manage media in the Information Repository Vaults.
- **Data Service Policies** - Create data services policies to manage the data lifecycle within the Information Repository. The data services policies can classify, collate, and consolidate data automatically. Easily migrate, replicate, or purge data between Vaults and ensure that data is preserved or maintained on media within a storage hierarchy.
- **Target and Process Policies** - Create policies to ingest data automatically. As data is ingested into the Information Repository, context and content metadata is extracted from the data and cataloged in databases.

Tasks the server manages are: the Locator Service, finding and connecting to available Vaults, receiving, locating, storing content and metadata to and from Vaults, and SHA256 checksum (digital fingerprinting).

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Client

The client contains all of the applications found in the server component except Vaults and administrative tools. It can run on any computer that is not running Phoenix DEM servers.

Client functionality can be run from the executables from your suite of product applications. Each application plays a role in your complete digital asset management solution. All Phoenix DEM applications are easy to use, and include many features to customize job parameters and schedules. The clients operate independently of servers and Vaults.

Client applications are:

- **Video Components Generator** - The video components generator specifies the quality for the picture thumbnail.
- **Locator Service** - The Locator is an essential component of communication to run any Phoenix DEM application, it enables the dynamic resource allocation, and it keeps the Information Repository current regardless of how large the environment is.
- **Network Activity** - Use to monitor all data, media, and vault operations within the Information Repository in real-time.
- **Digital Evidence Manager** - Locate, clip, and retrieve videos and associated files within the Information Repository. The files are located quickly, regardless of how many times called or to where the assets has been replicated or migrated. The assets can be restored to its original location or exported to any other computer on the network.
- **Search and Retrieve -** Locate data within the Information Repository. The files are located quickly, regardless of how many times called or to where the files have been replicated or migrated. The files can be restored to the original location or exported to any other computer on the network.
- **Target and Process** - Ingest data into the Information Repository. As data is ingested into the Information Repository, context and content metadata is extracted from the data and cataloged in databases.

Tasks the client applications manage are: searching digital assets for capture, ingest and moving assets within the Information Repository, communicating with servers for storage resources, digital fingerprinting validations, error and activity logging, and video file location and retrieval.

Administrative Control

Along with Phoenix DEM applications, a suite of command line executables are available for managing the Information Repository. When a window-based session is not available, the command lines can be used for scripting and running Phoenix DEM. Use the command line interface only if you are an advanced user of Phoenix DEM and are familiar with command line environments.

Access to any Phoenix DEM functionality can be controlled fully by the system administrator. Access to sensitive activities within the Information Repository, such as installing, opening, securing, and de-securing Vaults, requires administrator level access. This allows administrators to determine who has permissions to management functionality.

Administrators can limit access to functionality as follows:

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- Client access for users.
- Protecting clients. By default, policies can be modified only by administrators.

When changing rights, exercise caution because services that use policy files normally run at an elevated privilege level and have access to data to which the typical user may not have rights.

- Setting rights on media. If a user does not have read access to a media, then no search/retrieve from media is granted. If a user does not have write access to media, then the user cannot ingest data to media.

Similar to the setting of rights, most of the functionality that is set by default in Phoenix DEM can be modified to meet your unique ILM requirements.

Extensibility

Phoenix DEM is equipped with resources to incorporate pre-processing or post-processing scripts into storage, migration, replication, and purge policies. It is also equipped with internal APIs to link the storage management engine to other front-end or back-end applications.

Command Lines

From your suite of product applications, there are application executable files and dynamic link library files (.dll). Notice that some of the executable files have a "Cl" at the end of the name - for example, VaultAdminCl.exe.

The "Cl" stand for command line. If you click the "Cl" version application executable, the application runs via a terminal. This functionality is intended for advanced users to do scripting or diagnostic work within the application.

In addition, there are services that are running all the time in the background. The command line arguments that you can work with are application startup arguments for advanced users to perform diagnostics on the program.

For more information see Command Line Arguments.

Installation

This topic provides information, tips, and how to's on installing SoleraTec's Phoenix DEM.

Before installation, make sure your computer meets minimum system requirements.

There are a few differences to understand between the Server Bundle and the Client Bundle. The main difference between the Phoenix DEM Server Bundle and Client Bundle is that the Server Bundle includes Phoenix DEM Vaults and administrative tools. You should install the Server Bundle on computers you want Vaults to reside. Install the Client Bundle on computers you want only clients to run.

Here is a brief breakdown of each bundle:

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Server Bundle

- Does not have to run on a server.
- Must be installed first on your network, otherwise the Client Bundle will not function.
- Includes all of the components contained in the Client Bundle. Because of this, do not install the Server and Client Bundle on a single computer.
- Install on computers that are to have Vaults.

For optimal performance, install the Server Bundle local to the Vaults they are to manage.

Client Bundle

- Install just the Client Bundle on other computers on the network after you have installed the Server Bundle somewhere on your network.
- Install on computers that do not contain Vaults.

Install

See the appropriate section for the platform to install your Phoenix DEM. Uninstall instructions are included as well.

- Windows
- Mac
- Linux

Important Installation Tips

- To install, you need to have administrative permissions.
- Phoenix DEM must be installed on a NTFS partition, not a FAT32 partition. This is especially true for Mac Boot Camp Windows installations as the default partition is FAT32.
- Phoenix DEM Vaults require running on a computer configured to use static IP address assignment. Using DHCP to obtain a dynamic IP address may result in unpredictable system behavior.
- To play videos in the Media Viewer, Apple QuickTime 7 and supported codecs need to be installed on your computer. **Supported audio codecs:** X-QT, X-QUICKTIME, PCMU, GSM, PCMA, MPEG4-GENERIC, MP4A-LATM. **Supported video codecs:** X-QT, X-QUICKTIME, H263-1998, H263-2000, H264, MP4V-ES.

Network Connectivity Requirement

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Phoenix DEM is designed to run on a network. Running it on a computer that is not networked causes unexpected performance. If you need to run it on a standalone Windows computer, you must use the Microsoft Loopback adapter bundled in Windows to create a virtual network environment. Go to http://support.microsoft.com/kb/839013 for details.

Firewall Rights Requirement

Most firewalls are pre-configured to block most programs from communicating to maintain a high level of security. Your local firewall software on the computer where Phoenix DEM is installed may interfere with Phoenix DEM operations.

If you are running a local firewall, make sure all Phoenix DEM components have pass through rights to at least the locally connected network or networks. Refer to your operating system documentation regarding how to unblock Phoenix DEM from communicating.

Date and Time Properties on Computers with Vaults

All computers in the Information Repository that contain Vaults must be synchronized to the same time source for the Information Repository to function correctly.

Multicast

Phoenix DEM uses multicast and beacon technology to communicate between clients, Vaults, and available Phoenix DEM services. The default Phoenix DEM multicast address is 224.0.23.160.

Server Bundle and Client Bundle Contents

When you install the DVD or launch the installation executable, you are given the option of installing a Server Bundle or a Client Bundle. If you select to install the Client Bundle, only a subset of the applications in the Server Bundle are installed.

Applications listed below that end with "Cl" and "Svc" are run from a command line.

The Server Bundle and Client Bundle include the following:

Module	Contents	Server	Client
Help	Browser based (HTML) help	Yes	Yes
Documentation	PDF based documentation	Yes	Yes

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Module	Contents	Server	Client
Administration	Applications for administration and Information Repository monitoring, including: • Vault Admin • Network Activity • Locator Admin Command Line Interface (LocAdminCl) **Server only** • Vault Admin Command Line Interface (VaultAdminCl) **Server only**	Yes	Yes
Search and Retrieve	Applications for searching for and retrieving data from the Information Repository, including: • Search and Retrieve • Search and Retrieve Command Line Interface (SrchRtrvCl) **Server only**	Yes	Yes
Digital Evidence Manager	A visual interface that enables users to search for digital evidence files in the Information Repository. It also allows you to export selected clips or entire files to any computer on the network.	Yes	Yes
Target and Process	Applications for ingesting data, including: • Target and Process • Target and Process Policies • Target and Process Command Line Interface (TgtProcCl) **Server only** • Target and Process Service (TgtProcSvc)	Yes	Yes
Data Services	Applications for migrating, replicating, and purging data in the Information Repository, including: • Data Service Policies • Data Services Command Line Interface (DataSvcsCl) **Server only** • Data Services Service (DataSvcsSvc).	Yes	Yes

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Module	Contents	Server	Client
Vault	The Vault services applications: • Vault Service (VaultSvc) • Add or Remove Vault Wizard	Yes	No

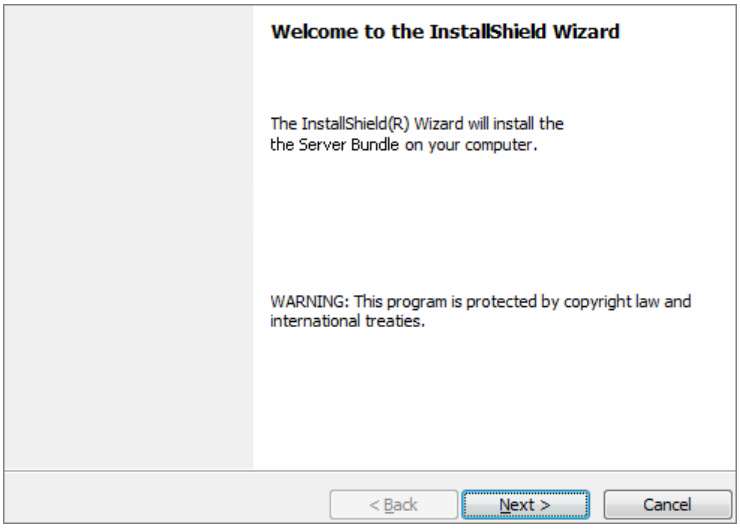
Windows

Perform the following steps to install on the Windows operating system (OS). The appearance of your screens may vary slightly from those shown here depending on your Phoenix DEM version and your OS.

Installation is quick and easy and done through an InstallShield Wizard. Each wizard dialog box includes **Back**, **Next**, and **Cancel** buttons. The **Back** button navigates you back to the previous dialog box (except on the Welcome window), and the **Next** button accepts current values and advances you to the next window in the wizard. The **Cancel** button closes the wizard without saving values. The **Finish** button appears on the last wizard window to complete the process.

Server Bundle for Windows

1. Click the application executable (from your installation disc or installation folder).


Welcome to the InstallShield Wizard
The InstallShield(R) Wizard will install the the Server Bundle on your computer.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

2. Select **Next** to review the software license agreement.

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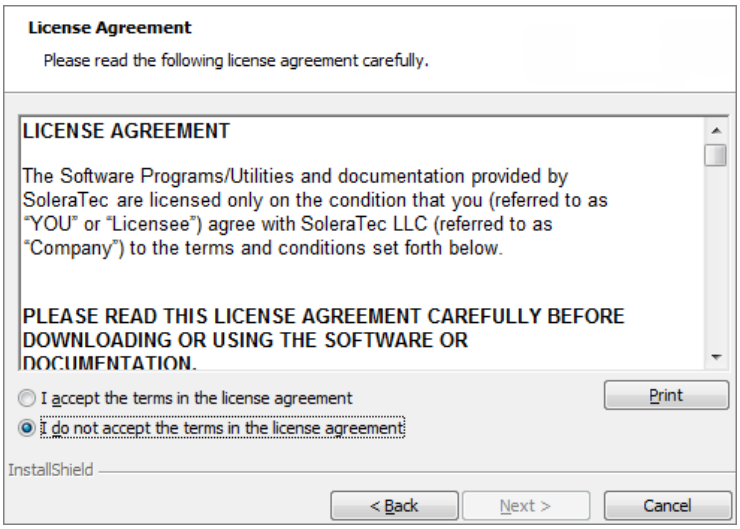
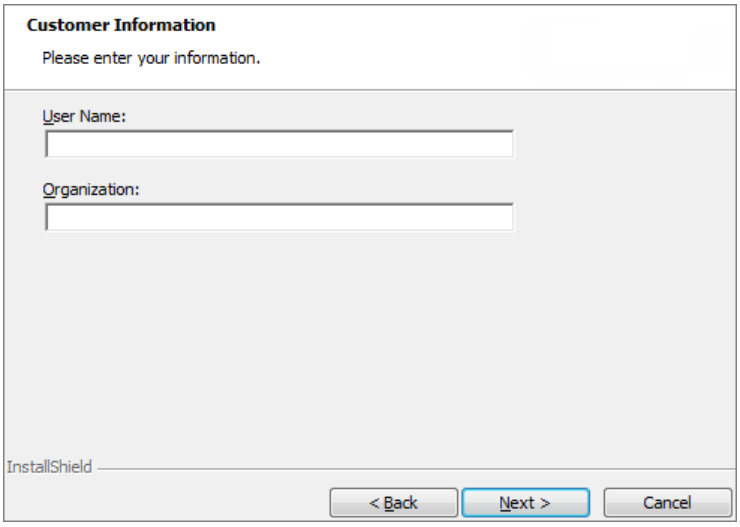

License Agreement
Please read the following license agreement carefully.
LICENSE AGREEMENT
The Software Programs/Utilities and documentation provided by SoleraTec are licensed only on the condition that you (referred to as "YOU" or "Licensee") agree with SoleraTec LLC (referred to as "Company") to the terms and conditions set forth below.
PLEASE READ THIS LICENSE AGREEMENT CAREFULLY BEFORE DOWNLOADING OR USING THE SOFTWARE OR
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

3. Read the license agreement, and if you accept the terms, select **I accept the terms in the license agreement**.

4. Select **Next** to enter your customer information.



5. Type your **User Name** and **Organization**.

6. Select **Next** for the setup type.

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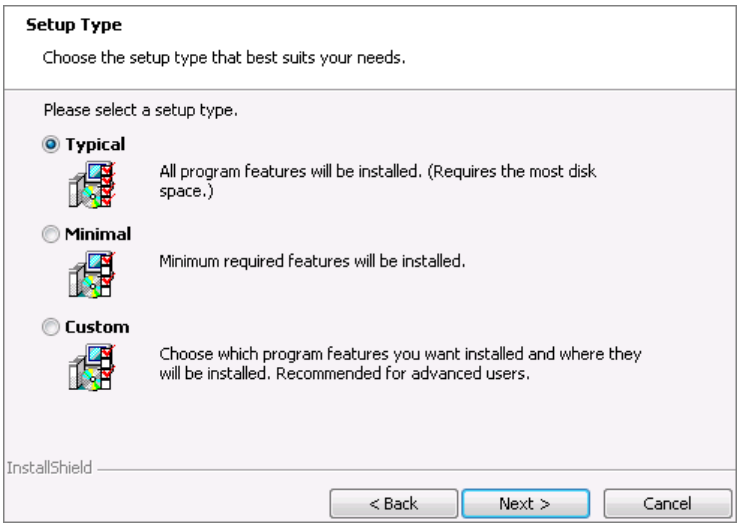

Setup Type
Choose the setup type that best suits your needs.
Please select a setup type.
Typical
All program features will be installed. (Requires the most disk space.)
Minimal
Minimum required features will be installed.
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

8. Select the type of Server installation you prefer. Typical is recommended:

   Typical - A complete installation. See Server Bundle contents.

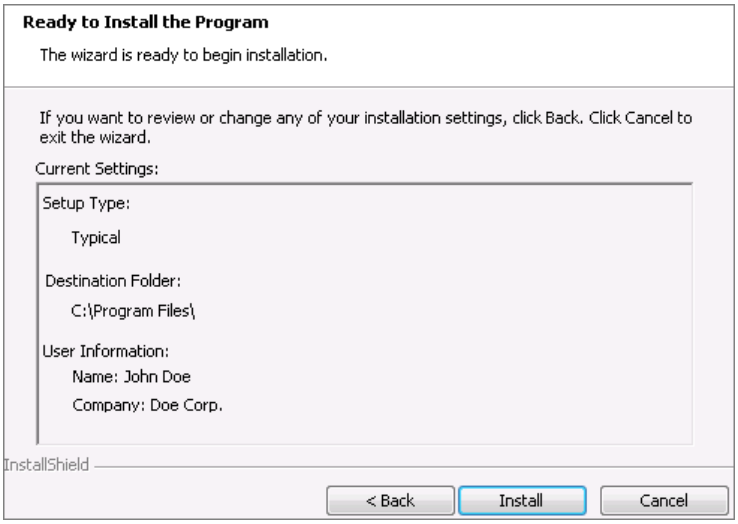
   Minimal - Includes everything in Typical except Help and Documentation.

   Custom - By default, includes everything in Typical. If you select **Custom**, click **Next** for the Custom Setup window to appear. To select which components are to be installed click the Help drop-down icon for a list of feature options.

   The Custom Setup window also includes the following option:

   - **Space** launches the Disk Space Available window, displaying the amount of disk space required to install selected features. The window also highlights any volumes that do not have enough disk space to support the selected features.

9. After you have made your selection, select **Next** to review.



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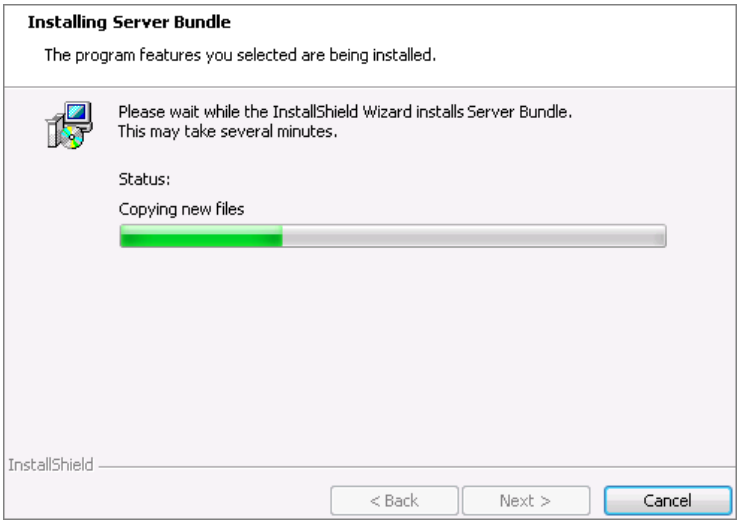
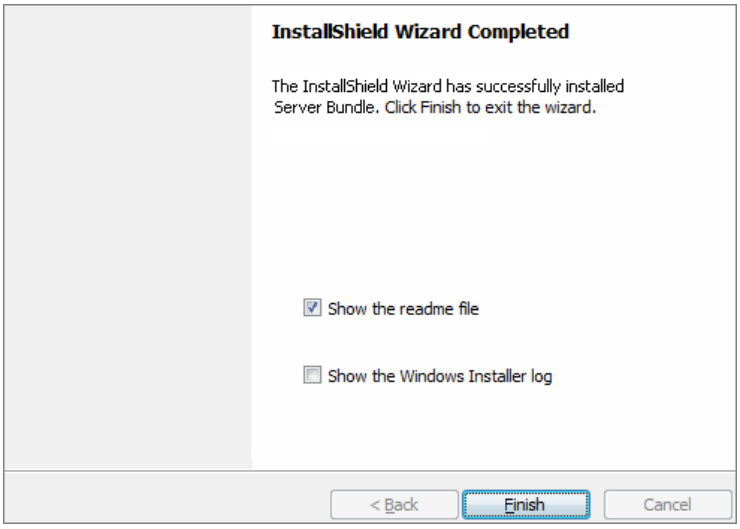
10. Review the summary of installation in the Ready to Install the Program window. If all the information looks correct, click the **Install** button and the Installing Server Bundle window displays.



11. When the installation is complete, the InstallShield Wizard Completed window presents you with the options to see the readme file and log.


InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Server Bundle. Click Finish to exit the wizard.
Show the readme file
Show the Windows Installer log
< Back
Finish
Cancel

12. Click the **Finish** button to complete the process.

Client Bundle for Windows

1. Click the application executable (from your installation disc or installation folder).

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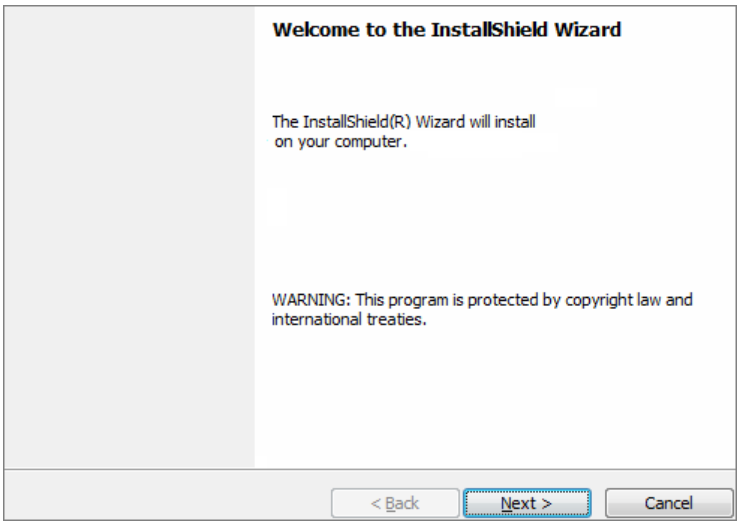
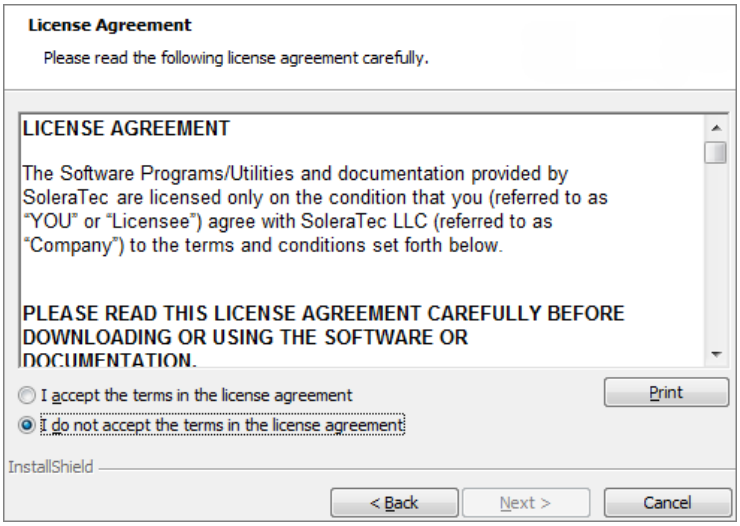

Welcome to the InstallShield Wizard
The InstallShield(R) Wizard will install on your computer.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

2. Select **Next** to review the software license agreement.


License Agreement
Please read the following license agreement carefully.
LICENSE AGREEMENT
The Software Programs/Utilities and documentation provided by SoleraTec are licensed only on the condition that you (referred to as "YOU" or "Licensee") agree with SoleraTec LLC (referred to as "Company") to the terms and conditions set forth below.
PLEASE READ THIS LICENSE AGREEMENT CAREFULLY BEFORE DOWNLOADING OR USING THE SOFTWARE OR
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

3. Read the license agreement, and if you accept the terms, select **I accept the terms in the license agreement**.

4. Select **Next** to enter your customer information.

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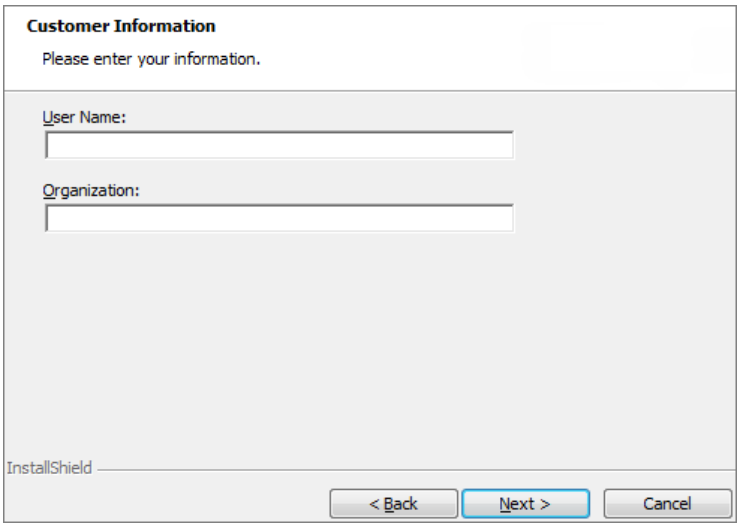
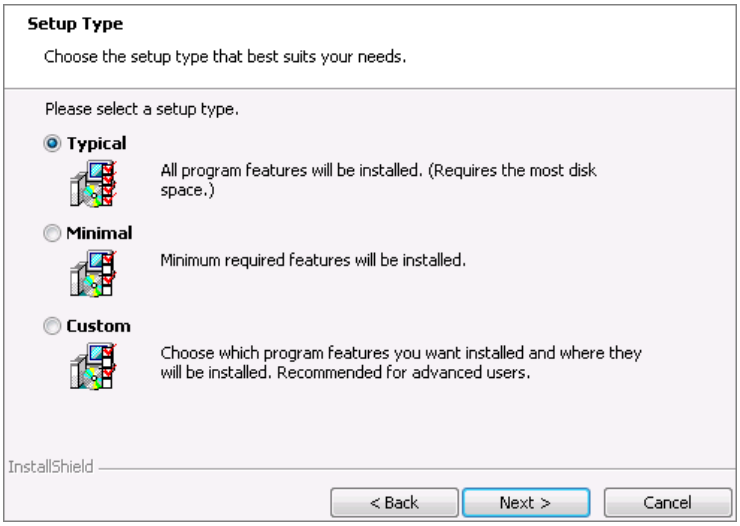


5. Type your **User Name** and **Organization**.

6. Select **Next** to select a setup type.


Setup Type
Choose the setup type that best suits your needs.
Please select a setup type.
Typical
All program features will be installed. (Requires the most disk space.)
Minimal
Minimum required features will be installed.
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

7. Select the type of installation you prefer. Typical is recommended:

   Typical - A complete installation. See Client Bundle contents.

   Minimal - Includes everything in Typical except Help and Documentation.

   Custom - By default, includes everything in Typical. If you select **Custom**, click **Next** for the Custom Setup window to appear. To select which components are to be installed click the Help drop-down icon for a list of feature options.

   The Custom Setup window also includes the following option:

   - **Space** launches the Disk Space Available window, displaying the amount of disk space required to install selected features. The window also highlights any volumes that do not have enough disk space to support the selected features.

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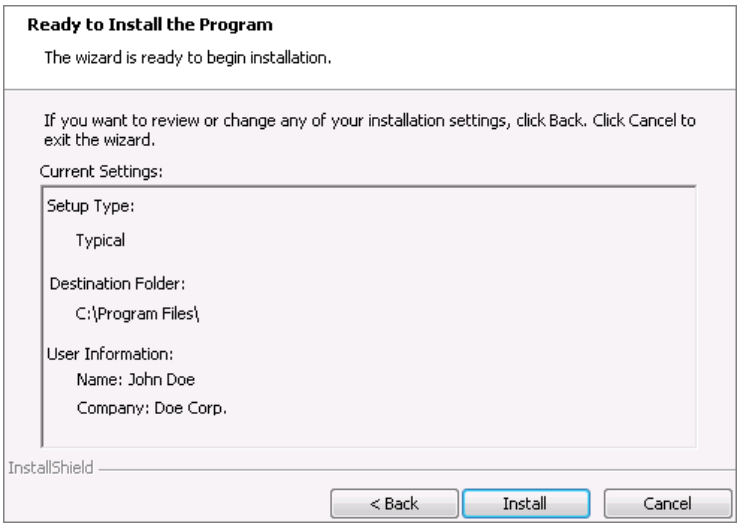
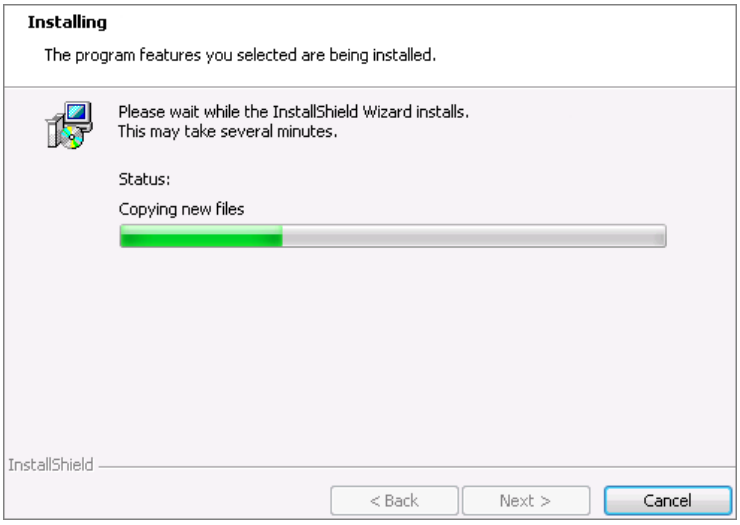
8. After you have made your selection, select **Next** to review.



9. Review the summary of installation in the Ready to Install the Program window. If all the information looks correct, click the **Install** button and the Installing Client Bundle window displays.



10. When the installation is complete, the InstallShield Wizard Completed window presents you with the options to see the readme file and log.

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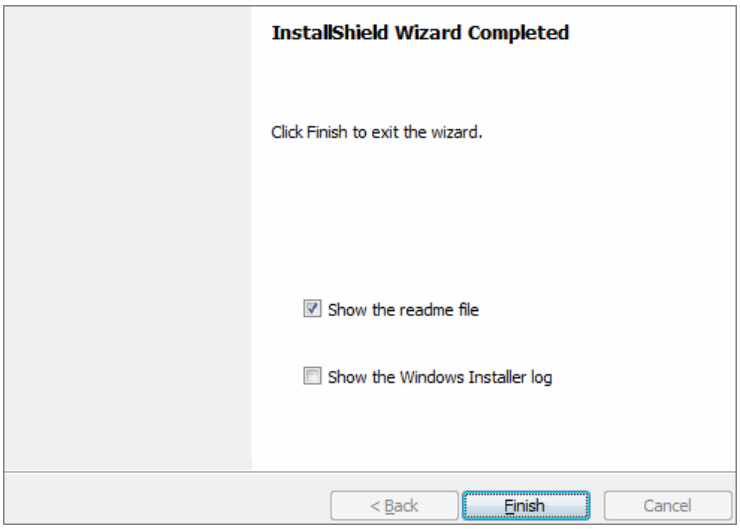

11. Click the **Finish** button to complete the process.

After installation is complete, the next step is to add Vaults. See Add or Remove Vault Wizard. For more information about what's next, see Getting Started.

When updating a previous Phoenix DEM installation, all Phoenix DEM Services settings will be reset to installation defaults. If you made any changes to these settings in the prior installation, you may need to reapply your changes after the update completes.

Uninstall from Windows

If you need to uninstall your Phoenix DEM from Windows, this can be easily done by following the steps below.

The uninstall process does not remove modified configuration files or files that were not in the installation, such as files that could have been added.

- Administrator rights are needed to uninstall Phoenix DEM.
- Before uninstalling Phoenix DEM, create a backup copy of any data that you do not want to lose.

1. Uninstall Phoenix DEM from your Windows computer just as you would any other Windows application.

When uninstalling Phoenix DEM from Windows, you might be asked whether to automatically close applications.

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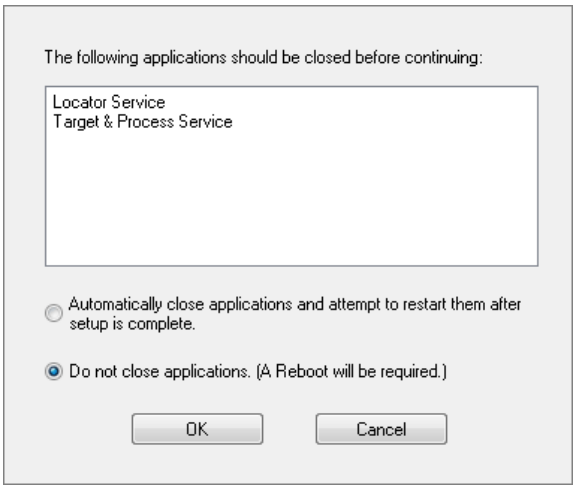
The following applications should be closed before continuing:
Locator Service
Target & Process Service
Automatically close applications and attempt to restart them after setup is complete.
Do not close applications. (A Reboot will be required.)
OK
Cancel

2. Select **Do not close applications (A Reboot will be required)**.

3. Reboot your computer once the Add/Remove Windows Programs is finished.

For more information see Installation.

Mac

Perform the following steps to install on the Apple operating system. The appearance of your screens may vary slightly from those shown here, depending on your Phoenix DEM version.

Installation is quick and easy; done through an Install Wizard. Each wizard dialog box includes **Go Back** and **Continue** buttons. The **Go Back** button navigates you back to the previous dialog box (except on the Welcome window), and the **Continue** button accepts current values and advances you to the next window in the wizard. The **Install** button appears on the last wizard window to complete the process.

Server Bundle for Mac

1. Click the application executable (from your installation disc or installation folder).

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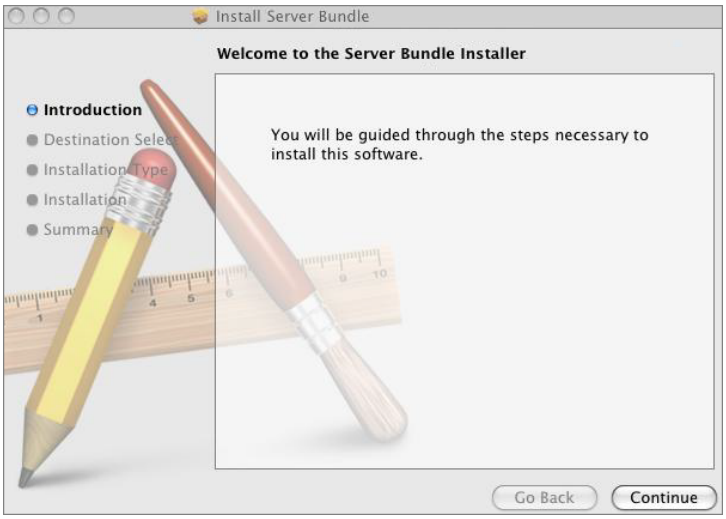
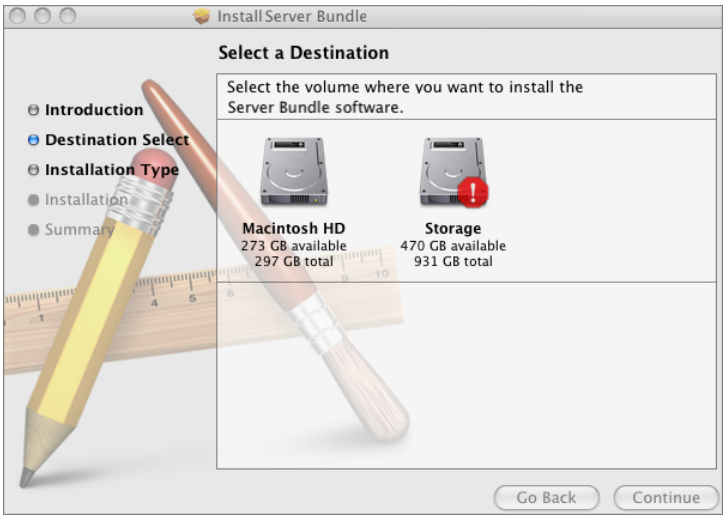


2. Select **Continue** for the Select a Destination window.



3. Accept the default destination for Phoenix DEM to be installed to.

4. Select **Continue** for the Installation Type window.

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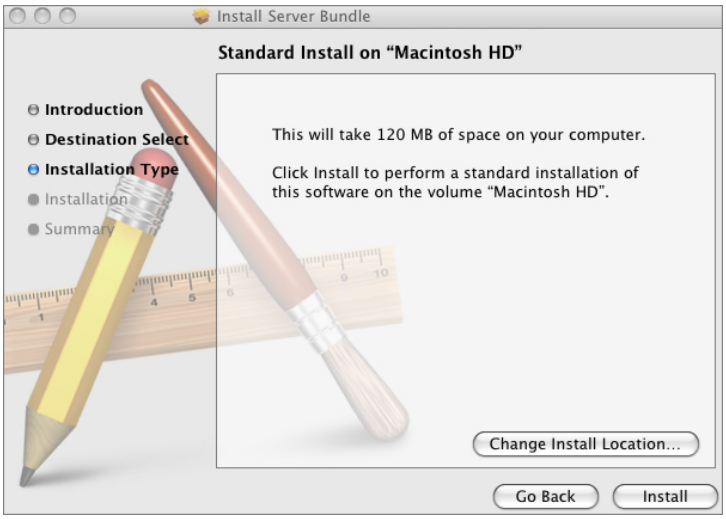
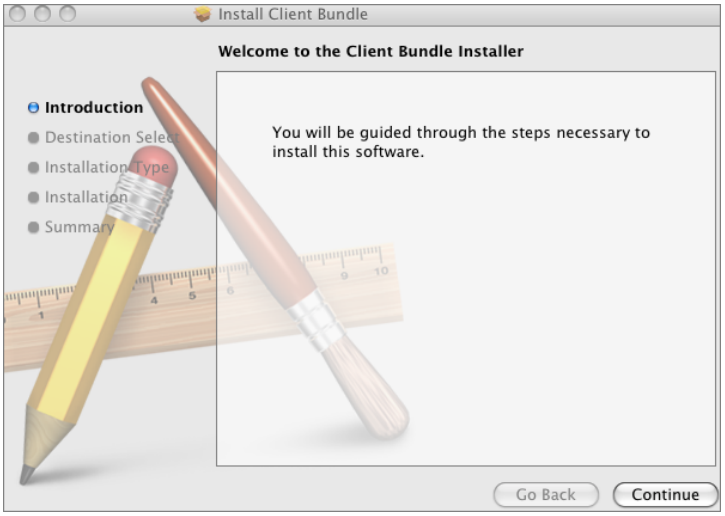


5. Click the **Install** button; the product installs.
6. When the installation is complete, restart your computer.

Client Bundle for Mac

1. Click the application executable (from your installation disc or installation folder).



2. Select **Continue**. If you have multiple hard drives installed, the Select Destination window appears. Otherwise, skip to the Installation Type window.

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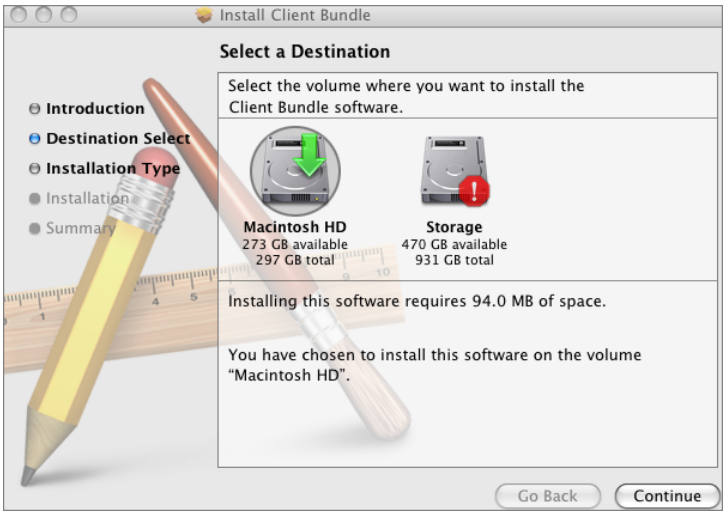
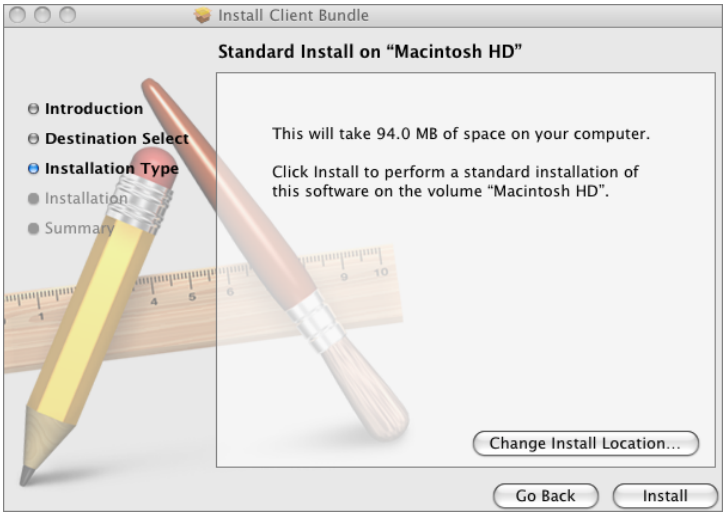


3. Accept the default destination for Phoenix DEM to be installed to.
4. Select **Continue** for the Installation Type window.



5. Click the **Install** button; the product installs.
6. When the installation is complete, restart your computer.

After installation is complete, the next step is to add Vaults. See Add or Remove Vault Wizard. For more information about what's next, see Getting Started.

Uninstall from Mac

If you need to uninstall Phoenix DEM, this can be easily done by following the steps below.

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The uninstall process will remove configuration files and data that were not in the original installation and created while using Phoenix DEM. This may include databases and media storage. Be sure to move any files or folders in the Applications > Phoenix folder to a safe location before uninstalling the product.

- Administrator rights are needed to uninstall Phoenix DEM.

1. Go to Applications > Utilities and open a Terminal.
2. In the Terminal, type **sudo /Applications/Phoenix/Bin/Uninstall.sh** and press **Return**.
3. Enter the Admin password when prompted and press **Return**. When you type, the password will not be shown.
    - This will uninstall Phoenix DEM from your Mac computer.
4. Reboot your computer.

For more information see Installation.

Linux

Perform the following steps to install on the Linux operating system.

Server Bundle for Linux

1. Open **Setup.html** (from your installation disc or installation folder). Follow the directions to open the Phoenix DEM Server Bundle. The following appears:

```
Phoenix DEM Install Wizard, version x.x.x



Welcome to the Install Wizard for SoleraTec Phoenix DEM.



This Install Wizard will help you to install SoleraTec's Phoenix DEM version
x.x.x on your

computer. During the installation process, you will be asked where to
install Phoenix DEM

and which components to install. Choices appear in a comma separated list
with the default

choice in square brackets. Pressing the Enter key selects the default
choice.



To continue, press <Enter>
```

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2. Press ENTER. The following appears:

```
==============



The current location for Phoenix DEM is /usr/local/Phoenix. Would you like
to install

Phoenix DEM in its current location?

[(y)es] (n)o (b)ack (q)uit >[y]
```

From this point on, you have the option of using **b** to go back to any earlier point in the process and change your selection. You can also use **q** to quit the installation process and exit the wizard.

3. Type **y** to accept the default location. Or, type **n** to enter a new location. If you select **n**, you are prompted to enter the new installation directory location. After typing **y**, the following appears:

```
==============



Here is a list of the packages available for installation. Please indicate
the package you want to

install by entering the number beside your selection. Number 1 is the
default choice and will be

chosen if you simply press the Enter key.

1. Phoenix DEM Server package

[1], 2, (b)ack, (q)uit >[1]
```

4. Type **1** to select the Phoenix DEM Server Bundle. The following appears:

```
==============



You chose to install the Server package to '/usr/local/Phoenix'. Is this
correct?

[(y)es] (n)o (b)ack (q)uit >[y]
```

5. Type **y**. The following appears:

```
==============

As services are started, you may safely ignore any warning messages
```

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```
which specify "WARNING" or "No active vaults found"


Installing Phoenix DEM Server package
```

After installation is complete, the next step is to add Vaults. See Add or Remove Vault Wizard. For more information about what's next, see Getting Started.

Uninstall from Linux

If you need to uninstall your Phoenix DEM from Linux, this can be easily done by following the steps below.

The uninstall process does not remove modified configuration files or files that were not in the installation bundle, such as log files or files that could have been added.

- Administrator rights are needed to uninstall Phoenix DEM.

- Before uninstalling Phoenix DEM, create a backup copy of any data that you do not want to lose.

1. Enter the following command at root (where Phoenix DEM was originally installed): Phoenix/Bin/uninstall.

2. Reboot your computer.

For more information see Installation.

Getting Started

Getting started with SoleraTec's Phoenix DEM is easy. This section provides instructions on how to launch the Phoenix DEM applications, and then how to quickly get started with a basic Phoenix DEM workflow. The Quick Start will get you up and running, but it is the review of the topics of this User guide in addition to the Quick Start workflow that will help you become a master of your Phoenix DEM.

Launch an Application

To launch an application, see the instructions under the operating system where you are running Phoenix DEM.

Windows

- From the Windows desktop, select Start > All Programs > Phoenix, and then select the application to run.

Command Line with Windows

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If using a command line, type the path, including the name of the executable for the client you want to launch. For example, type C:/Program Files/Phoenix/Bin/DataSvcPolicies.exe to launch Data Services Policies. Navigate to the directory that contains your Phoenix executables for available applications.

- Any executable that has "Svc" or "Cl" as part of its name is not an application.

The following are applications to launch from a command line:

Executable	Application
TgtProc	Target and Process
TgtProcPolicies	Target and Process Policies
DataSvcPolicies	Data Services Policies
SrchRtrv	Search and Retrieve
Digital EvidenceManager	Digital Evidence Manager
VaultAdmin	Vault Admin
NetActivity	Network Activity

Mac

- From the Mac desktop, browse to Applications > Phoenix > Bin, and then select the application to run.

Linux

1. To launch a Phoenix application on Linux using a GNOME desktop, double-click Computer on the desktop.
2. Double-click File System > usr > local > Phoenix > Bin, and then double-click the executable to launch. (For other Linux desktops, this process is similar.)

    - Any executable that has "Svc" or "Cl" as part of its name is not an application.

    The following are the applications in Bin to open. Depending on your product you may not see all the applications:

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Executable	Application
AddRemVltWzrd	Add or Remove Vault Wizard
DataSvcPolicies	Data Service Policies
HostInfo	Host Information
NetActivity	Network Activity
SrchRtrv	Search and Retrieve
TgtProc	Target and Process
TgtProcPolicies	Target and Process Policies
VaultAdmin	Vault Admin
Digital EvidenceManager	Digital Evidence Manager

Open with UNIX:

When starting an application on Linux through a terminal shell using **cd /usr/local/Phoenix/Bin/...**, click the **X** button on the terminal shell to close the terminal and application. If you press CTRL+C, it aborts and the application closes. If you have not saved your policy, any new parameters are not saved.

To avoid closing an application inadvertently, start the application using the nohup command. Type (**nohup ./VaultAdmin >/dev/null 2>&1 < /dev/null &**) at the prompt. This completely isolates the command from the parent terminal shell.

Quick Start

Now that you have SoleraTec's Phoenix DEM, let's get you up and running with it so you can begin to manage your digital assets.

These instructional procedures below provide a basis for subsequent workflows that you may encounter while using your product applications.

Follow the steps below.

1. Install Phoenix DEM

To install the software from a CD-ROM

a) Ensure that your computer is properly configured and connected to a network.

b) Insert the Phoenix DEM CD-ROM, and open Setup.html from your installation disc or folder.

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c) Follow the directions to open and install the Phoenix DEM Server Bundle.

d) If running on Windows, firewall settings are established automatically during the installation process. If running on a platform other than Windows, ensure that Phoenix DEM is not blocked by the firewall on your local computer.

To install the software from the website

a) Go to SoleraTec's website and click **Download**.

b) In the Installation section, click on Phoenix DEM to download. Be sure to check the version number and operating system.

c) Accept the License Agreement and click the **Start Download** button.

d) Follow installation procedures. Installation guidance can be found either in the Doc folder (after clicking on the downloaded executable), or online at the SoleraTec website, or in the Installation chapter of this guide.

2. Add a Vault

a) Find your suite of Phoenix DEM applications on your computer (see Launch an Application):

- From a Windows desktop, click **Start** > **All Programs** > **Phoenix**.

- From a Mac desktop, click **Applications** > **Preview**. The Preview window appears. Select **Applications** > **Phoenix** > **Bin**.

- From a Linux desktop, double-click **Filesystem** > **usr** > **local** > **Phoenix** > **Bin**.

b) Open the Add or Remove Vault Wizard and complete the wizard steps to create a Phoenix DEM Vault.

c) Reboot your machine after adding a vault.

At any time, you can add more Vaults, media, and licenses.

3. Prepare media

a) From your suite of Phoenix DEM applications, open the Vault Admin application.

b) From the Vault Admin left frame, beneath **Entire Network**, select and expand the items under the Vault you added in the previous step.

c) Select **Media**.

d) For the Prepare Media window, click . The Prepare Media window shown below is for hard disk media; this window is slightly different for other media types.

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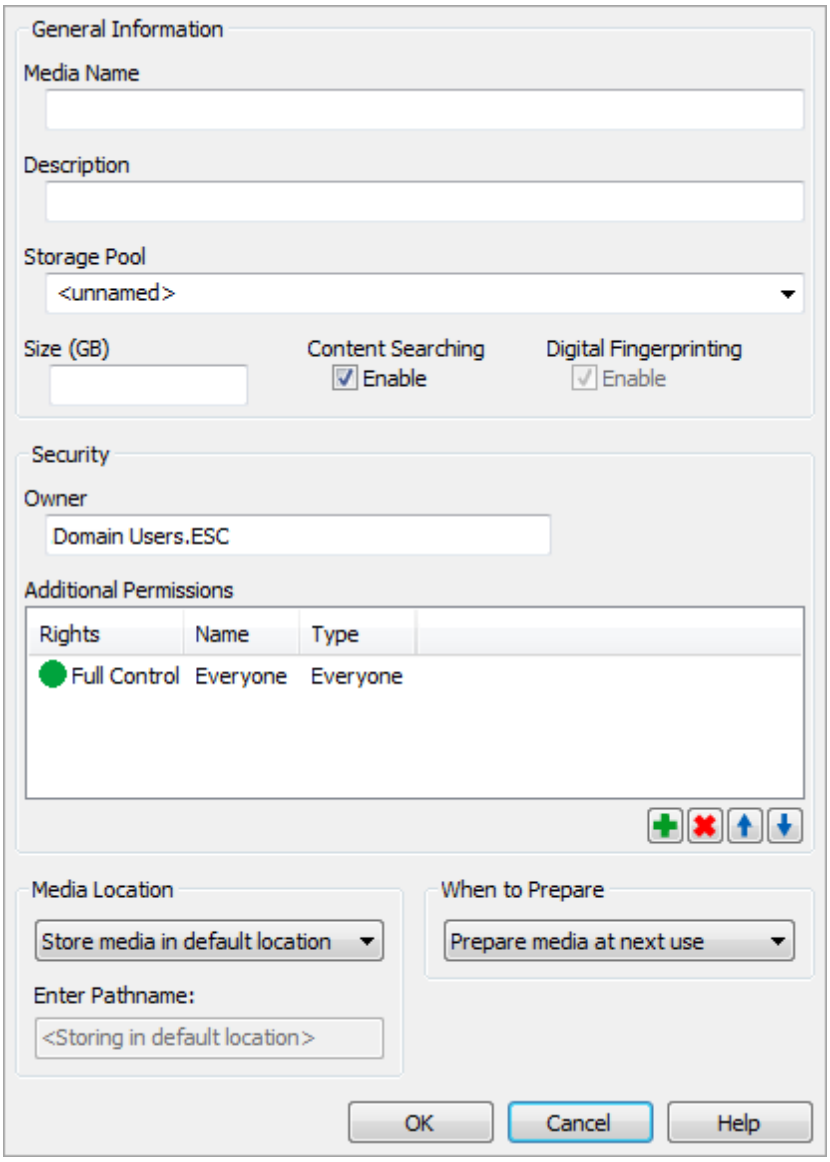

e) In the Prepare Media window, enter a **name** and **description**.

f) In the **Size** (GB) box, type the amount of storage space to make available for the Information Repository.

g) Set the **When to Prepare** drop-down list to **Prepare media now**.

h) Click **OK**. The new media appears in the right pane of the Vault Admin window.

i) Click the newly named unit of media, listed beneath the Vault name, in the left pane. Its details appear in the right pane.

j) Repeat the steps above for each unit of media needed.

4. Create ingest policies

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It is necessary to create an ingest policy in order to ingest files into the Information Repository.

- Use Target and Process Policies to build policies that drive automated scheduled ingest jobs of files already in primary storage and run unattended.
- Use Target and Process to manually run a single or several single ingest jobs of files already in primary storage.

5. Create policies to manage data

Once your data has been ingested into the Information Repository, you can automatically manage and control your data by creating a Data Service policy. You can migrate or replicate files to different levels of storage and purge files according to file age, type, and contents. See Data Services Policies.

6. Find and review data assets from the Information Repository

After your data is in the Information Repository, you can quickly and easily search for and retrieve files.

Use the Digital Evidence Manager to find, clip, and export production video (or parts of video files), and their metadata from the Information Repository.

7. Monitor Information Repository activity

Use Network Activity application to monitor your Information Repository. It provides a great visual of processing from your Vaults. For more information see Network Activity.

From your suite of product applications, open the Network Activity application (NetActivity.exe).

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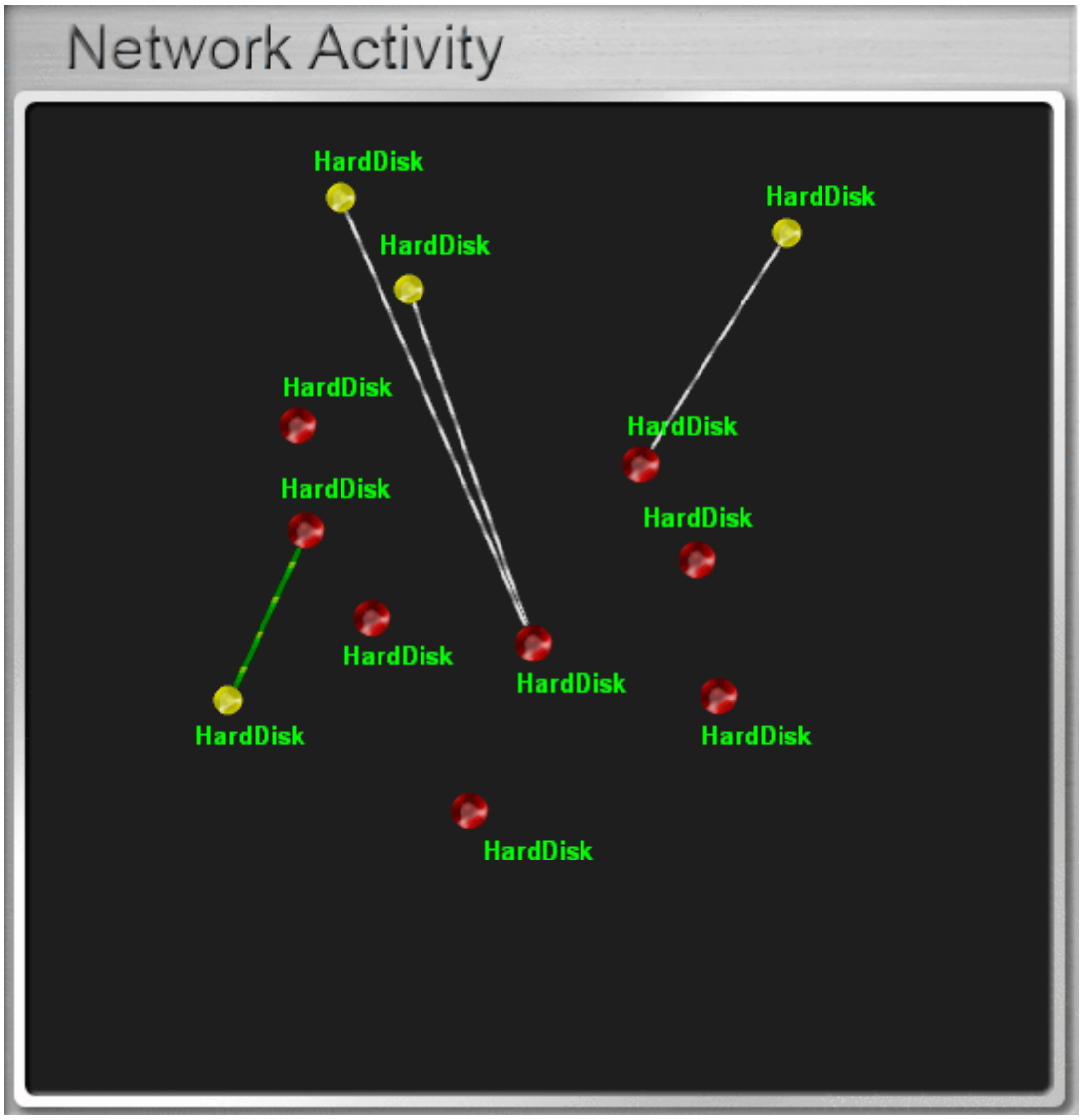

Vault Management

Vault operation is important to understand as it is key to managing your Information Repository. Vaults can be set up all across your network, which decentralizes your Information Repository for a safe, dynamic, and server-less solution for managing your data assets. Remember that a Vault is a CPU, SoleraTec's Phoenix DEM software, and storage, and each Vault on the network make up your Information Repository. The Vaults themselves have unique licensing and media attributes associated with them.

The tools for managing Vaults on your network are:

- **Add or Remove Vault Wizard** - An application to use for adding or removing a hard disk Vault, shadow hard disk Vault, standalone data tape Vault, or a data tape library Vault.

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- **Vault Admin** - The Vault Admin application allows you to view Vaults on your network. This can be run from the server or from the desktop client component.
- **Vault Services** - Vault Services is the engine that runs a Vault. If there are multiple Vaults, then a Vault Service runs for each Vault. This service must be run on the server component.

There are several facets to Vault management, most having to do with preparing and managing media. The Vault Admin is designed to support the day-to-day tasks associated with managing Vaults. For more information see Vault Admin.

Basic Media Concepts

Phoenix DEM Vaults use media to store video and data, all of which is protected and managed by the Information Repository. By using the Vault Admin application, you can manage media in your Information Repository.

Managed media can be in a physical form, such as a digital computer data tape, or it can be in a virtual form, such as a portion of hard disk assigned for use by the Information Repository. The list of media utilized is constantly being expanded, and every type of media has features that make it suitable for a certain purpose. For example, hard disk is a good medium to process files to because there is no latency associated with it. It is ready to accept data as it is sent from network clients and it can service several clients at the same time.

The media hierarchy is organized as such:

- The highest level of the hierarchy is the Vault itself.
- Media units are the next level and they coincide with logical media units like data tapes or portions of hard disks.
- The volume level is lowest. Volumes are sections of media units. They can be as large as the media itself or very small.

On some media, there can be one or several volumes on a unit. There can be one or more units of media in a Vault. There can also be multiple Vaults on a single host computer, depending on its performance and storage pools - where one or more pieces of media are linked together for a common use.

All managed media is configured with common elements including: label, header, data storage area, on-media catalog, data tape media, hard disk media, shadow hard disk, and virtual media.

Media Retention and Purging

Administrators can eliminate outdated data on supported media.

For hard disk Vaults, use Data Service Policies to define file retention rules for removing duplicated data or for retaining source data indefinitely. The same retention rules can be used even if files are never copied or moved. This allows data to be erased after a pre-defined period.

Using Vault Admin, you can erase media which overwrites erased files. When you erase data tape media, there is a delay in the actual event until just before the media is re-used. This ensures easy management of many units of media without having to wait for long delays associated with loading and positioning of media. If you do not want a delay, you can override the delay and execute the erase immediately.

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Workflow - Basic Vault Steps

1. From your suite of product applications, open the Add or Remove Vault Wizard application (AddRemVltWzrd.exe). For further explanation of how to launch applications using different operating systems, see Getting Started.
2. You'll need to add a Vault before you do anything. Once added, it is up and running automatically.
3. Media is used to store your files or video. Designate your media type and a place to which to store your media. See Prepare Media.
4. After your media is prepared, then you'll need to load your media. See Load Media.
5. Vault parameters can be viewed and edited through the Vault Properties. Or, Vault activity can be monitored using Network Activity.
6. Vaults can be removed or shut down at any time. See Remove Vaults and Vault Shutdown or Restart.

Add Vaults

After your Phoenix DEM clients are installed and configured, add Vaults using the Add or Remove Vault Wizard. Use the Add or Remove Vault Wizard before or in conjunction with the Vault Admin, but in order to administrate a Vault, a Vault must be added first. (When removing Vaults use the same wizard, see Remove Vaults.)

Keep the following in mind:

- You must have administrative rights to add a Vault.
- All devices running in Phoenix DEM must be time synchronized. If they are not, unexpected results may occur.
- To change Vault settings, including the naming of Vaults, security, logs, notifications, diagnostics, memory allocation for devices, database optimization parameters, and licensing after you have installed a Vault, see Vault Properties.

Vault Considerations

Vaults are installed on computers to control and manage storage devices. The computer hosting a Vault needs adequate resources to operate and manage the storage device, and considerations should be made for growth and scale. As the amount of data being stored increases, the volume of entries in the Vault database also increases. Vaults that use high capacity storage devices need system resources to accommodate.

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Consideration	Description
Calculating Needed Memory for the Vault Catalog	The Vault database requires about 2% of the total amount of available storage space.
Date and Time Properties on Computers with Vaults	All computers that contain Vaults must be synchronized to the same time source for the Information Repository to function correctly.
Hosting More than a Single Vault on One Computer	A single computer can host up to four Vaults as long as it is equipped with enough processor power, memory, and disk space to accommodate the needs of the storage Vaults. This type of configuration is common in smaller environments where a disk-based and a tape-based Vault are both configured on a single computer. Configure multiple Vaults on a single network computer, but for optimal performance it is recommended that Vaults reside on computers other than those where Target & Process clients, Search & Retrieve, and Digital Evidence Manager are implemented.
Starting or Restarting Vaults Manually	If added Vaults are not visible by the Information Repository, you may have to start them manually. See Start Vaults Manually.
Security/Rights	When adding a Vault, it is accessible to all users. To change Vault rights see Vault Properties Security tab.

Workflow - Add Vaults

Work through the following steps to add Vaults to your Information Repository:

1. Add Vaults using the wizard.
2. Reboot the computer with added Vaults.
3. Prepare media using Vault Admin.

Add or Remove Vault Wizard

Use the Phoenix DEM Add or Remove Vault Wizard to add or remove a hard disk Vault, shadow hard disk Vault, standalone tape Vault, or tape library Vault. Unless you are an advanced user and have clearly defined reasons for changing the default values, it is best to use default values, leaving **advanced user mode** de-selected. Most settings can be modified after the fact using Vault Properties. After adding a Vault, the next step is to prepare media for your Vault and Information Repository.

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If running the wizard in standard mode, not all of the wizard windows appear for you because the wizard uses default values for setup. The screenshots below have advanced mode selected so you can see all wizard windows.

Adding a Vault

1. From your suite of product applications, open the Add or Remove Vault Wizard application (AddRemVltWzrd.exe). The Welcome window appears. Each wizard dialog box includes **Back**, **Next** , **Help**, and **Cancel** buttons. The **Back** button navigates you back to the previous dialog box (except on the Welcome window), and the **Next** button accepts current values and advances you to the next window in the wizard. The **Help** button opens documentation, and the **Cancel** button closes the wizard without saving values.

The **About** button appears on the first wizard window to provide information, and the **Finish** button appears on the last wizard window to complete the process.

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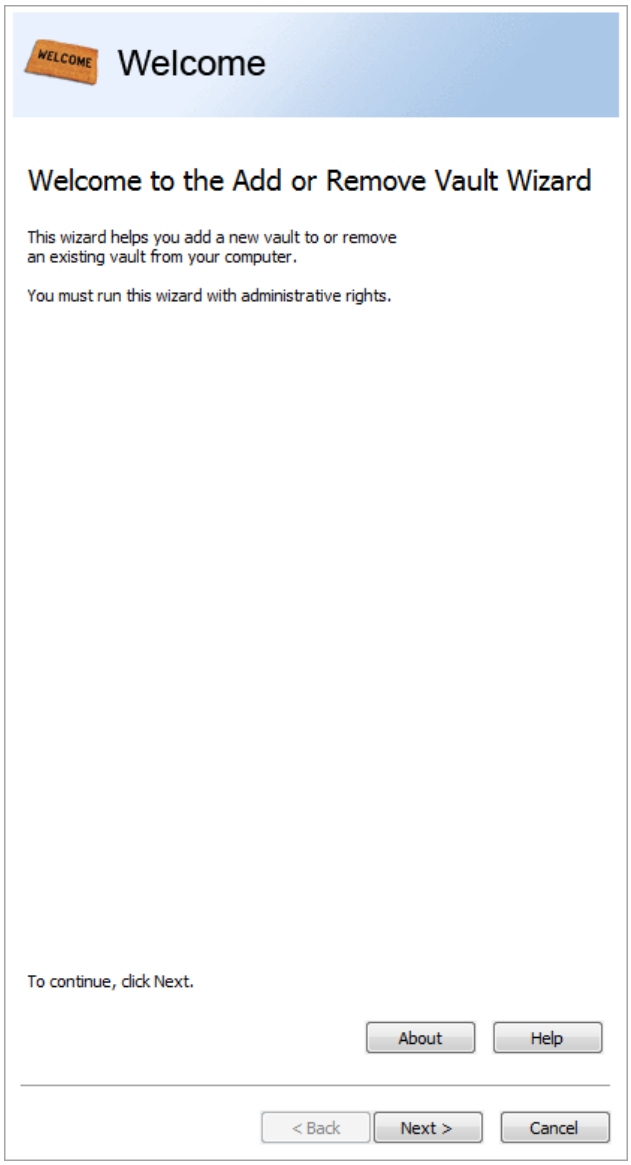
Welcome
Welcome to the Add or Remove Vault Wizard
This wizard helps you add a new vault to or remove an existing vault from your computer.
You must run this wizard with administrative rights.
To continue, click Next.
About
Help
< Back
Next >
Cancel

2. Click **Next** for the Add or Remove window

   - Select either **Add a new Vault to this computer** or **Remove an existing Vault from this computer**. Depending on your selection the wizard follows the path for you to add a Vault or to remove one. If removing a Vault, see Remove Vaults.
   - Select **Run this wizard in advanced mode** to bypass default values and customize Vault parameters. These instructions cover all of the advanced mode options but it is recommended to run in standard mode, leaving this option de-selected.

   If there are four Vaults installed on the computer where the wizard is run from, then **Add new Vault to this computer** is disabled. In that case, delete a Vault before adding a new one.

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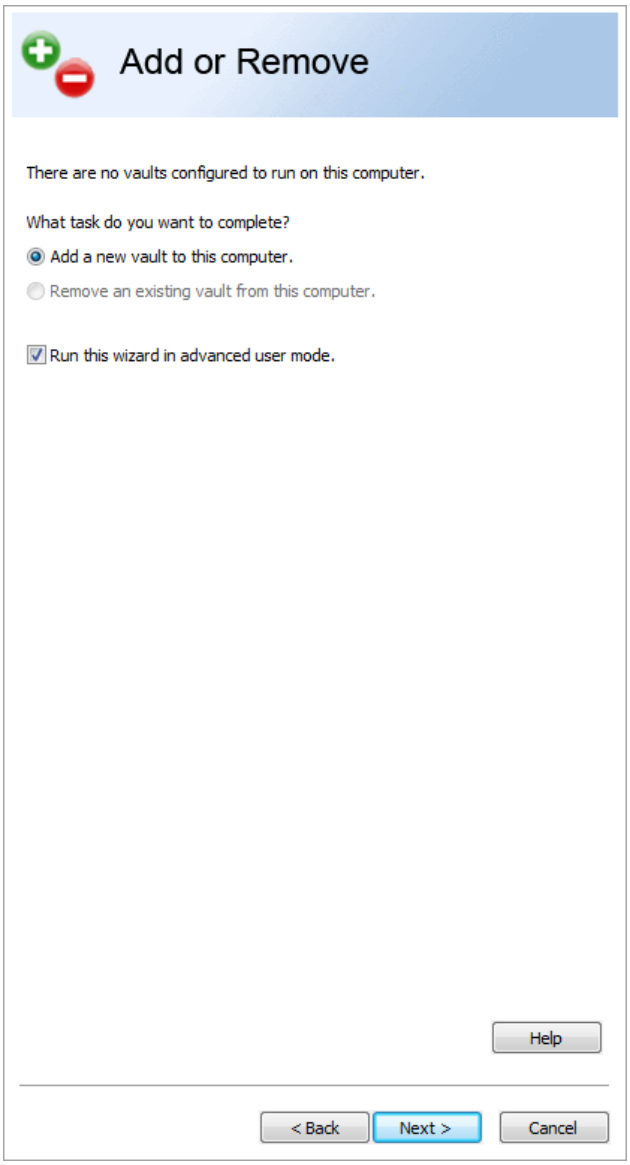
Add or Remove
There are no vaults configured to run on this computer.
What task do you want to complete?
Add a new vault to this computer.
Remove an existing vault from this computer.
Run this wizard in advanced user mode.
Help
< Back
Next >
Cancel

3. Click **Next** for the Description window.

- From the **What type of device will be used to store the data?** drop-down list, select either Hard Disk, Shadow Hard Disk, Tape Library, Stand Alone Tape Drive, or Veracity Coldstore. Depending on your selection, subsequent content on wizard windows change accordingly.
- In the **What is the name of this Vault**, type a Vault name or use the default if it is already populated with a name you want to use.

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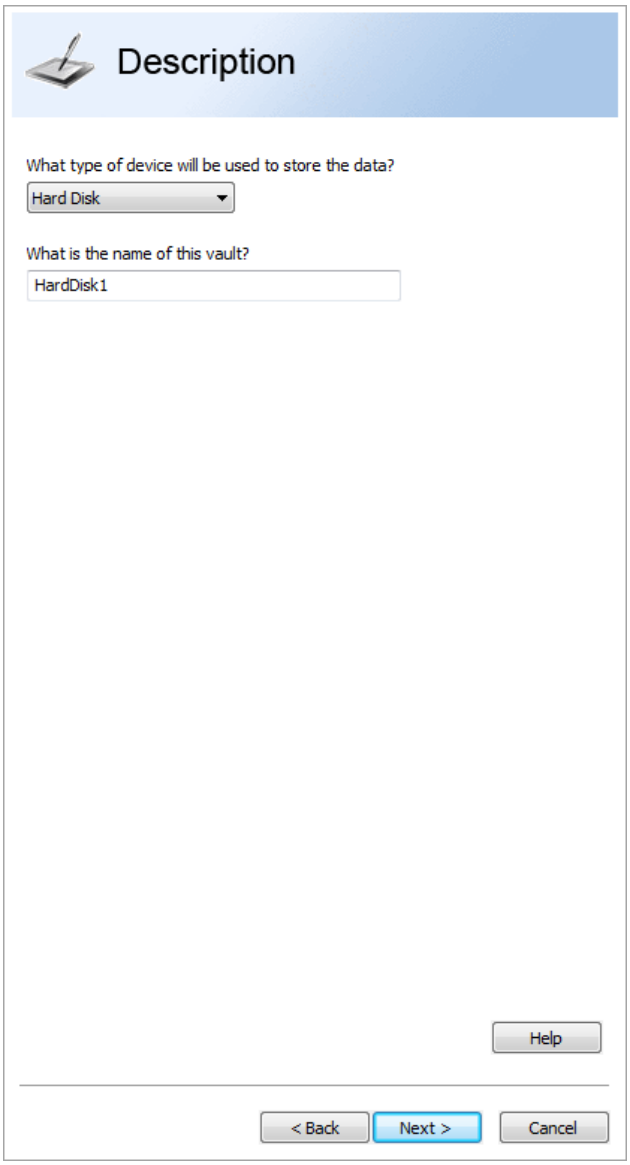

4. Click **Next** for the Device window (appears for advanced mode only). The **Device** window enables you to define how many data streams are allowed simultaneously and how many files are kept in a directory. To work through the Device window for your storage device type, see the appropriate heading below:

Hard Disk

- From the **How many data streams are allowed at a time?** drop-down list, select from a range of 1 - 10. Data streams refers to the number of connections made to a Vault at once. Several connections enables clients to communicate with the Vault simultaneously. The more streams permitted requires more processing power.

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- From the **How much memory should be used for each data stream cache?** drop-down list, select between 5, 10, 15, or 20 MB. Here, you are defining how much virtual memory is set aside for incoming and outgoing data during file storage and retrieval. A larger cache can improve performance, but at the expense of using more virtual memory. The total amount of space used equals the number of data streams multiplied by the selected cache size. With 10 data streams and 10 MB of cache, the Vault sets aside 100 MB of total virtual memory for caching data. A selection of 10 MB is usually sufficient.

- From the **When storing data, how many files will be kept in a directory?** drop-down list, select between 50 - 500. Data is stored in files in the Vault. More files provides more storage on the media, but also slows down performance. The following details the number of files that correlates with each value.

Value	Number of Files
50	125 billion
100	250 billion
150	375 billion
200	500 billion
300	750 billion
400	1 trillion
500	125 trillion

- In the **Where will media be stored by default?** box, type a default location to store and manage media, or select a default location from the Browse for Folder window by clicking the **Browse** button.

- From the **Do you want storage media to be created automatically?** drop-down list, choose **Yes** or **No**.

    - If you choose Yes, from the **How much storage do you want to use?** drop-down list, choose a value between 0 Bytes and 10.00 TB. Media will automatically be created for your Vault.

    - If you choose No, media will need to be created manually at a later time. See Prepare Media.

- From the **Where can temporary files be stored?** box, type a location for the working cache, or select a location from the Browse for Folder window by clicking the **Browse** button. The default location is <install-dir>/WorkingCache. When Phoenix DEM processes files, it may create temporary files for efficient performance; especially when clipping video files.

- From the **How much disk space can be used for storing temporary files?** drop-down list, select how much working cache space is used for temporary files.

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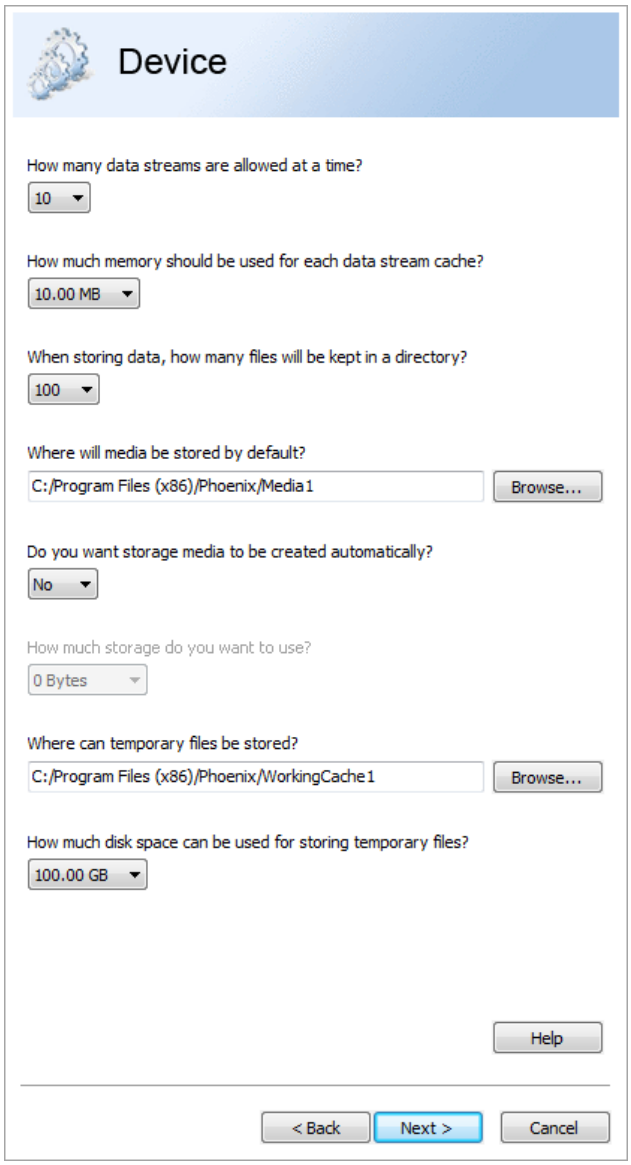
Device
How many data streams are allowed at a time?
10
How much memory should be used for each data stream cache?
10.00 MB
When storing data, how many files will be kept in a directory?
100
Where will media be stored by default?
C:/Program Files (x86)/Phoenix/Media1
Browse...
Do you want storage media to be created automatically?
No
How much storage do you want to use?
0 Bytes
Where can temporary files be stored?
C:/Program Files (x86)/Phoenix/WorkingCache1
Browse...
How much disk space can be used for storing temporary files?
100.00 GB
Help
< Back
Next >
Cancel

Shadow Hard Disk

- From the **How many data streams are allowed at a time?** drop-down list, select from a range of 1 - 10. Data streams refers to the number of connections made to a Vault at once. Several connections enables clients to communicate with the Vault simultaneously. The more streams permitted requires more processing power.

- From the **How much memory should be used for each data stream cache?** drop-down list, select between 5, 10, 15, or 20 MB. Here, you are defining how much virtual memory is set aside for incoming and outgoing data during file storage and retrieval. A larger cache can improve performance, but at the expense of using more virtual memory. The total amount of space used equals the number of data streams multiplied by the selected cache size. With 10 data streams and 10 MB of cache, the Vault sets aside 100 MB of total virtual memory for caching data. A selection of 10 MB is usually sufficient.

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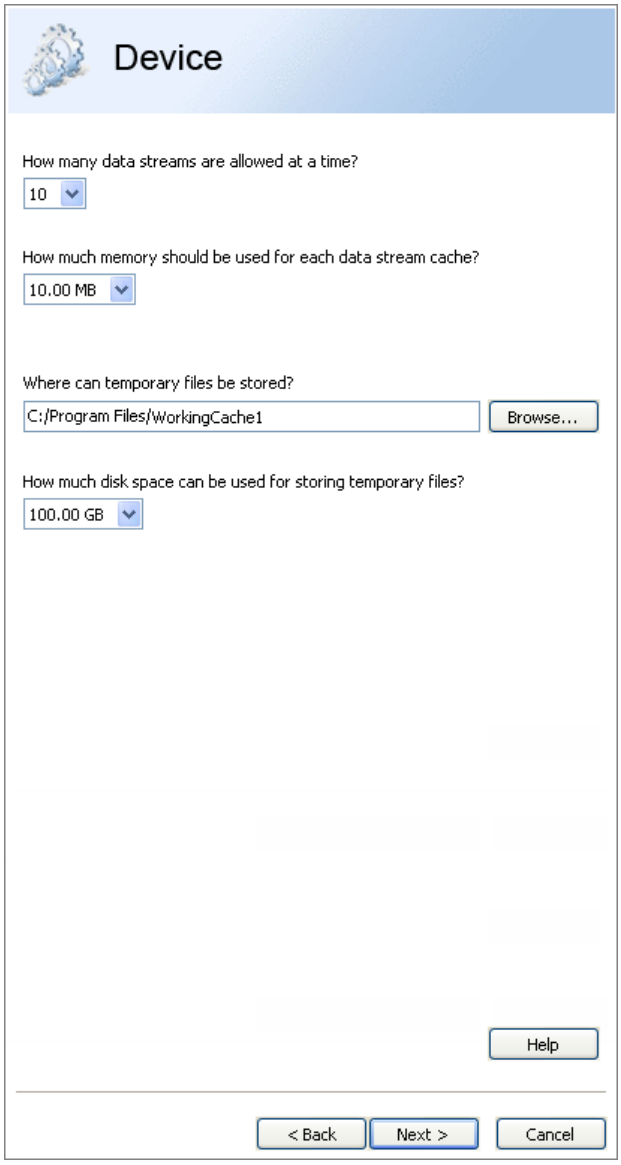
- From the **Where can temporary files be stored?** box, type a location for the working cache, or select a location from the Browse for Folder window by clicking the **Browse** button. The default location is <install-dir>/WorkingCache. When Phoenix DEM processes files, it may create temporary files for efficient performance; especially when clipping video files.
- From the **How much disk space can be used for storing temporary files?** drop-down list, select how much working cache space is used for temporary files.


Device
How many data streams are allowed at a time?
10
How much memory should be used for each data stream cache?
10.00 MB
Where can temporary files be stored?
C:/Program Files/WorkingCache1
Browse...
How much disk space can be used for storing temporary files?
100.00 GB
Help
< Back
Next >
Cancel

Tape Library

If you are using Windows Vista or older, or Windows Server 2008 or older, you must first disable the tape library and tape drives in the Windows Device Manager so Windows does not interfere with Phoenix DEM's management of the device. See Disable SCSI Devices.

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- From the **Which tape library do you want to use?** box, select a device. If no devices are found, make sure the tape drive is connected to your computer and powered on. If you are adding a Vault to a Windows computer, ensure that the device or devices are disabled in the Windows Device Manager. Then, click **Look for Devices** to refresh the list.

- Some tape libraries do not support automatic detection of their tape drives. The phrase **drives need to be identified** appears to the right of the device name. When **Next** is clicked, you need to select the drives.

- From the **How much memory should be used for each data stream cache?** drop-down list, select between 5, 10, 15, or 20 MB. Define how much virtual memory is set aside for incoming and outgoing data during file storage and retrieval. A larger cache can improve performance, but at the expense of using more virtual memory. The total amount of space used equals the number of data streams multiplied by the selected cache size. With 10 data streams and 10 MB of cache, the Vault sets aside 100 MB of total virtual memory for caching data. A selection of 10 MB is usually enough.

- From the **Where can temporary files be stored?** box, type a location for the working cache, or select a location from the Browse for Folder window by clicking the **Browse** button. The default location is <install-dir>/WorkingCache. When Phoenix DEM processes files, it may create temporary files for efficient performance; especially when clipping video files.

- From the **How much disk space can be used for storing temporary files?** drop-down list, select how much working cache space is used for temporary files. The working cache should be large enough to hold multiple large video files. The default size is 100 GB.

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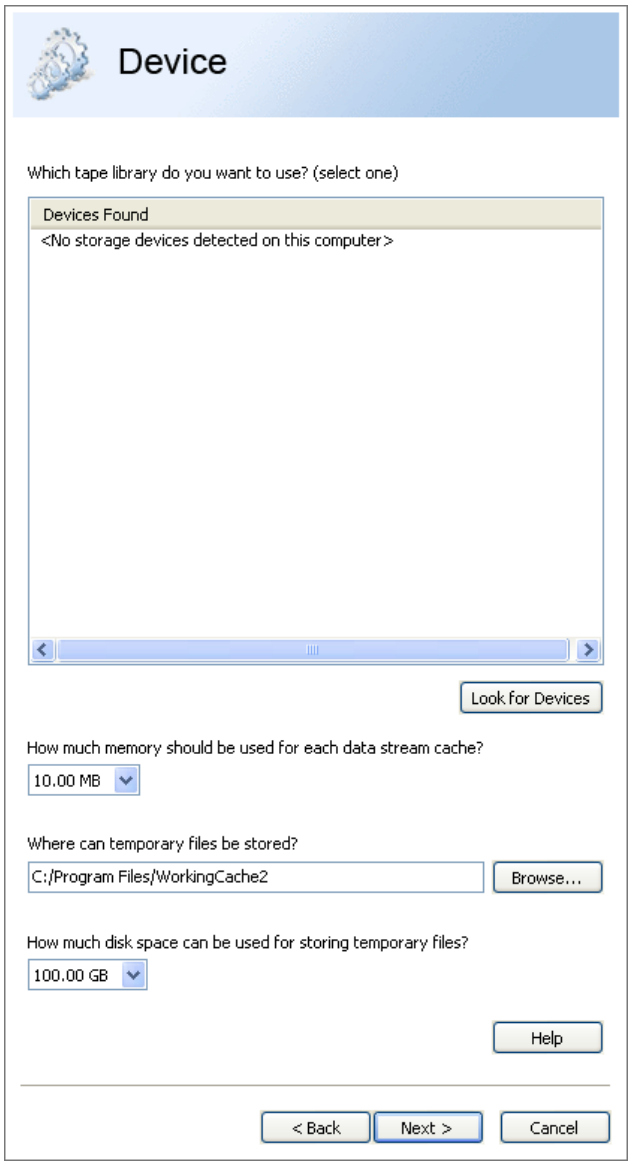

- Click **Next**. If the tape library was not able to provide the identification for its tape drives, a second device window appears. From the **Drives to identify** group drop-down lists, select the drives. If the device was able to identify its tape drive, then the next wizard window appears.

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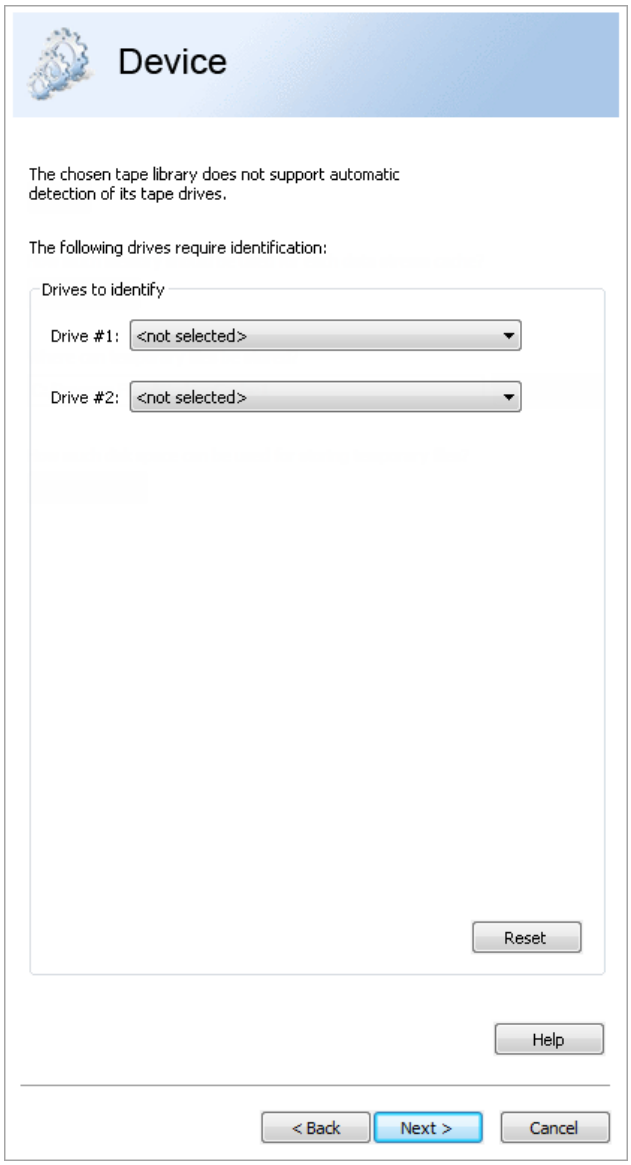

Standalone Tape Drive Vault

If you are using Windows Vista or older, or Windows Server 2008 or older, you must first disable the device in the Windows Device Manager so Windows does not interfere with Phoenix DEM's management of the device. See Disable SCSI Devices.

- From the **Which standalone tape drive do you want to use?** box, select a device. If no devices are found, make sure the tape drive is connected to your computer and powered on. If you are adding a Vault to a Windows computer, ensure that the device or devices are disabled in the Windows Device Manager. Then, click **Look for Devices** to refresh the list.

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- From the **How much memory should be used for each data stream cache?** drop-down list, select between 5, 10, 15, or 20 MB. Define how much virtual memory is set aside for incoming and outgoing data during file storage and retrieval. A larger cache can improve performance, but at the expense of using more virtual memory. The total amount of space used equals the number of data streams multiplied by the selected cache size. With 10 data streams and 10 MB of cache, the Vault sets aside 100 MB of total virtual memory for caching data. A selection of 10 MB is usually enough.

- From the **Where can temporary files be stored?** box, type a location for the working cache, or select a location from the Browse for Folder window by clicking the **Browse** button. The default location is <install-dir>/WorkingCache. When Phoenix DEM processes files, it may create temporary files for efficient performance; especially when clipping video files.

- From the **How much disk space can be used for storing temporary files?** drop-down list, select how much working cache space is used for temporary files. The working cache should be large enough to hold multiple large video files. The default size is 100 GB.

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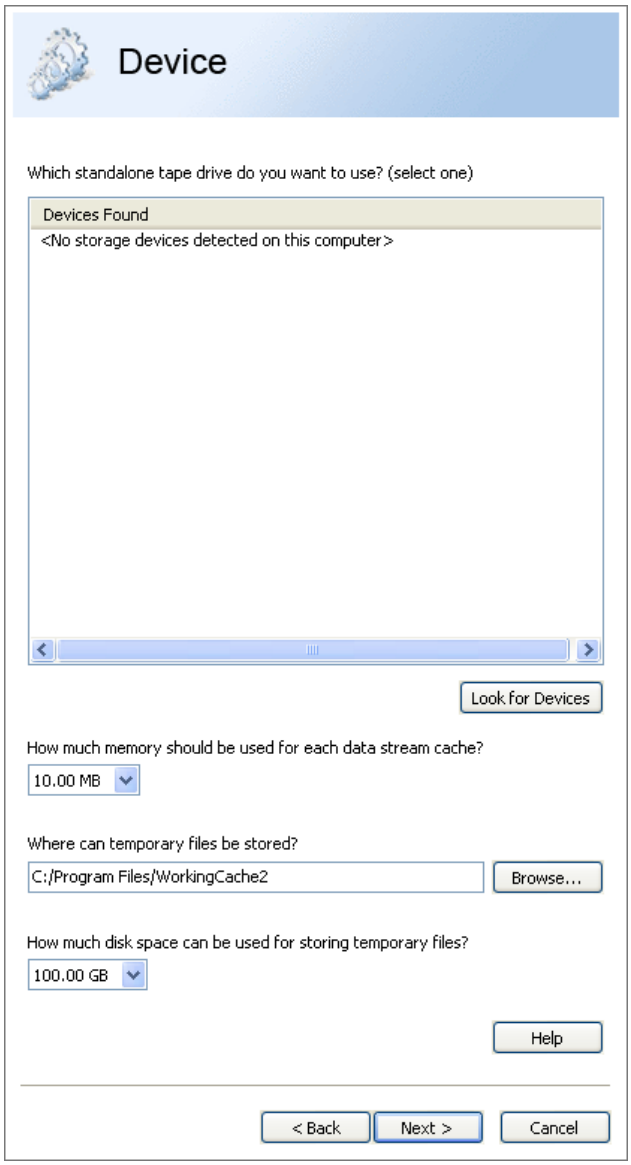

Veracity Coldstore

- In the **What is the IP address of the Coldstore?** text box, the IP address of the Veracity Coldstore device. The IP address must be in dot notation. Click the **Test** button to test connectivity to the device.
- From the **How many data streams are allowed at a time?** drop-down list, select from a range of 1 - 10. Data streams refers to the number of connections made to a Vault at once. Several connections enables clients to communicate with the Vault simultaneously. The more streams permitted requires more processing power.

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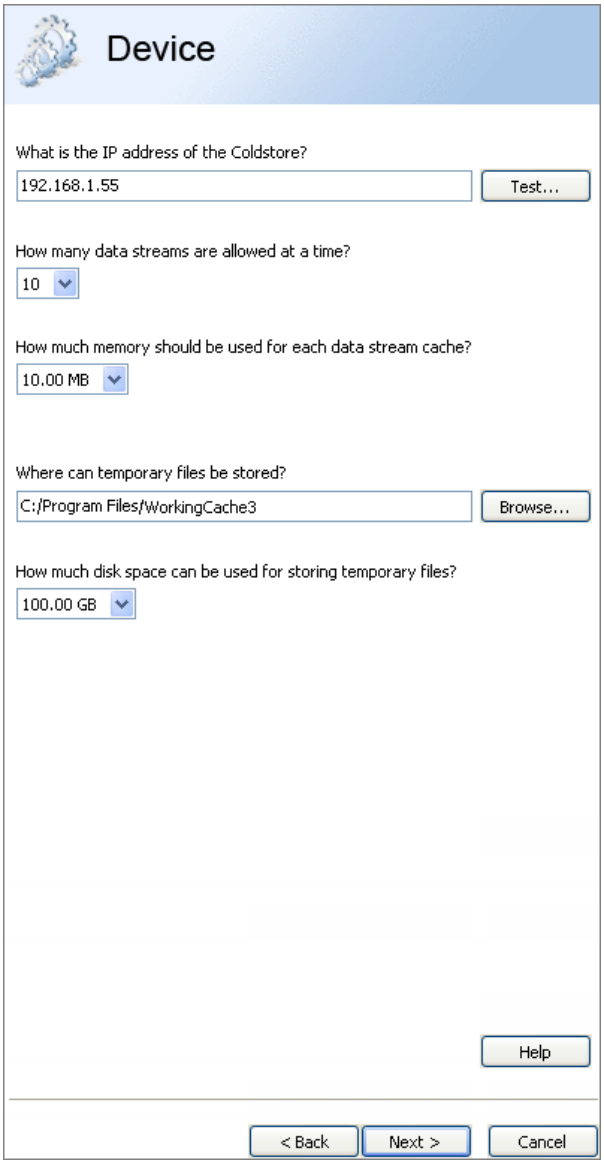
- From the **How much memory should be used for each data stream cache?** drop-down list, select between 5, 10, 15, or 20 MB. Here, you are defining how much virtual memory is set aside for incoming and outgoing data during file storage and retrieval. A larger cache can improve performance, but at the expense of using more virtual memory. The total amount of space used equals the number of data streams multiplied by the selected cache size. With 10 data streams and 10 MB of cache, the Vault sets aside 100 MB of total virtual memory for caching data. A selection of 10 MB is usually sufficient.

- From the **Where can temporary files be stored?** box, type a location for the working cache, or select a location from the Browse for Folder window by clicking the **Browse** button. The default location is <install-dir>/WorkingCache. When Phoenix DEM processes files, it may create temporary files for efficient performance; especially when clipping video files.

- From the **How much disk space can be used for storing temporary files?** drop-down list, select how much working cache space is used for temporary files.



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5. Click **Next** for the Database window (appears for advanced mode only). The database keeps track of Vault contents, information, and metadata.

    - From the **Where will the database be stored?** box, type the location to store the database, or select a location from the Browse for Folder window by clicking the **Browse** button.
    - Using the **At what time daily do you want the database optimized?** drop-down lists, set the hours, minutes, and AM/PM for how often the database gets optimized to make sure Phoenix DEM and the Information Repository continue to function optimally.
    - From the **How many database files can be opened at a time?** drop-down list, select between 10 - 500 to limit how many files can be open at once. Having more files open allows for a faster search, but more files requires more Information Repository resources.
    - From the **How much virtual memory can the database use?** drop-down list, select between 256 MB - 2 GB. For best Information Repository performance, select a value that does not exceed 75% of the physical memory on the computer.

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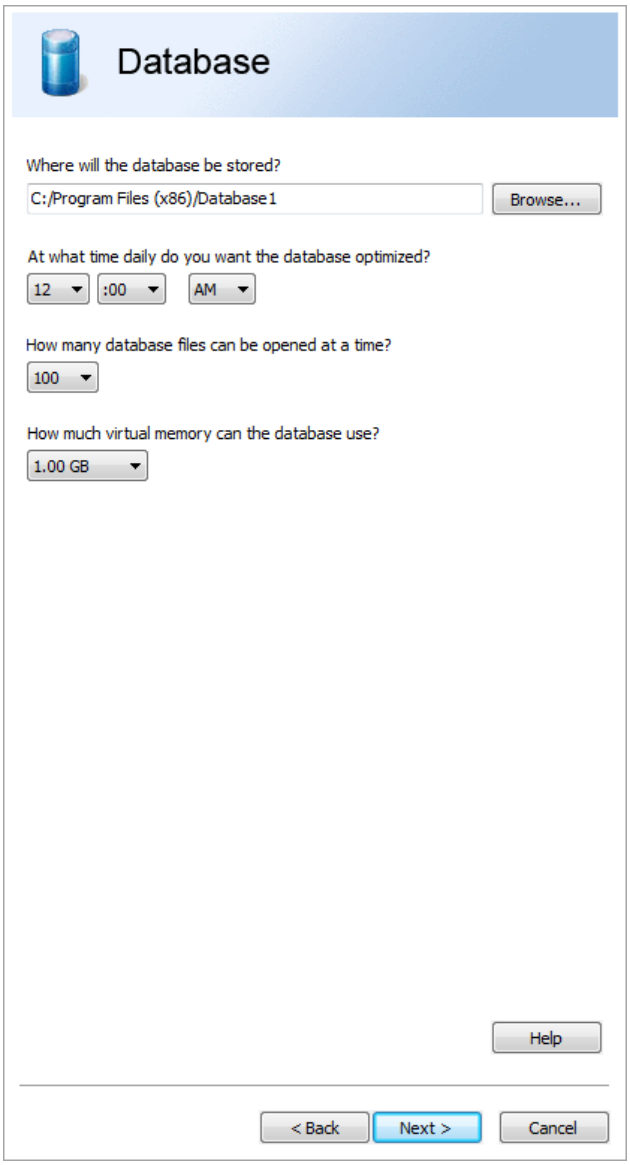

6. Click **Next** for the Logs window (appears for advanced mode only). Use to define where activity and error logs are written to.

   - Select **Enable activity logging** to activate logging functionality. Activity logs provide a security audit trail for these events: Vault start, Vault stop, file read, file write, file create, file delete, media load, media unload, and media erase. For these events, the name and IP of the user who executed the event and the date and time the event was executed are reported. Activity logging is optional, but if activated they create in a tab-delimited format and can be viewed in any application that supports the format, such as Microsoft Excel.

   - From the **Where should the activity log be stored?** box, type a location of where to write activity logs, or select a location from the Activity Log Location dialog box by clicking the **Browse** button.

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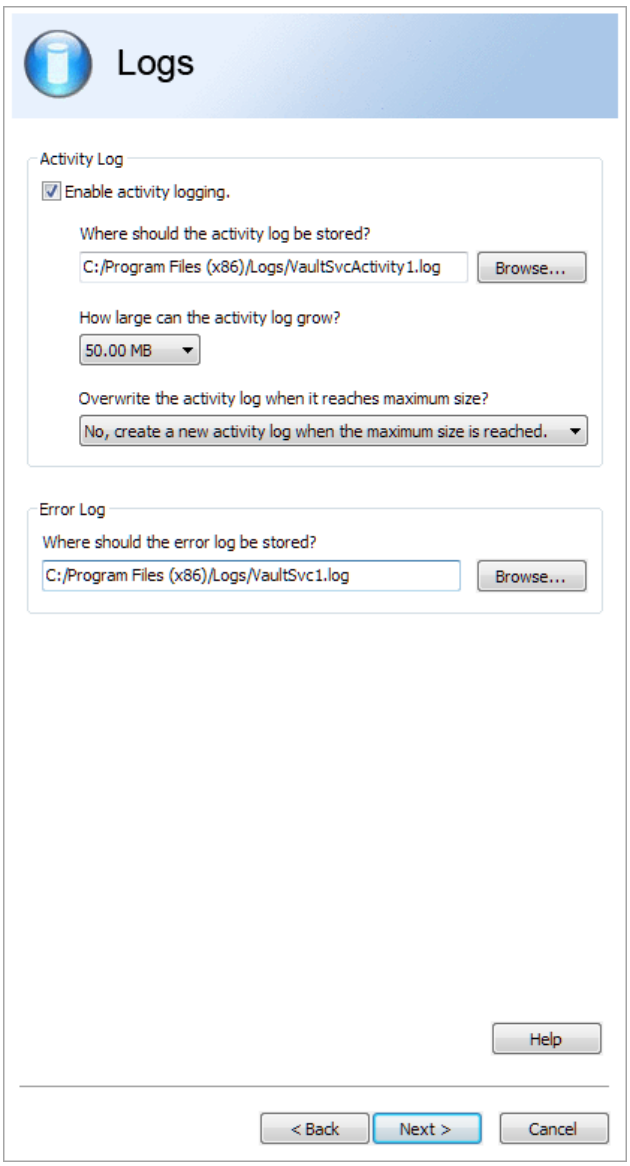
- From the **How large can the activity log grow?** drop-down list, select between 25.00 MB - 1.00 GB to define the maximum size an activity log can grow to. Limit the size of the log because it can be difficult to find specific information in a huge activity log.
- From the **Overwrite the activity log when it reaches maximum size?** drop-down list, select either **Yes** or **No**. By selecting No, a new activity log is created whenever the current activity log reaches the maximum size. Overwriting the activity log prevents against proliferation.
- From the **Where should the error log be stored?** box, type a location of where to store error logs, or select a location from the Error Log Location dialog box by clicking the **Browse** button. Error logs are always enabled and are created when a Vault encounters a problem. Error logging is supported for every Vault in your Information Repository; the logs include warning and Vault start and stop information.



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7. Click **Next** for the Notification window. Use to define where e-mails about Information Repository events are sent and where Phoenix DEM events should be logged.

   - Select the **Enable e-mail notifications** checkbox to receive an e-mail when an event occurs of interest for managing a Vault. The events include Vault start, Vault stop, media requests, etc., and are the same as those recorded for notifications. If de-selected, no notifications are sent and other fields in the group box are disabled.

   - In the **Who should receive e-mail notifications?** box, type the e-mail address of the user receiving the Phoenix DEM event notifications.

   - In the **What is the name or IP address of your mail server?** box, type the address of your mail server. Use either IP address or computer name, and then click the **Send Test Email** to test the path. If successful, a dialog box displays, "A message had been sent and should be delivered shortly". Click **OK** to close the dialog box. Valid parameters are not tested here. If parameters are invalid, then the e-mail notifications do not work.

   - From the **Where should events be logged?** drop-down list, select one of the following for where events are logged:

     Computer Console - Events are logged in a computer monitor console. It remains open as long as the Vault is running. If the Vault is stopped, the console disappears. If the Vault is restarted, the console disappears and then reappears.

     Window - Events are logged in computer monitor window. It remains open as long as the Vault is running. If the Vault is stopped, the window disappears. If the Vault is restarted, the window disappears and then reappears.

     By selecting **Computer Console** or **Window** in a Windows environment, configure Vault service on Windows to open a window on the desktop for diagnostic messages. Once configured, Vault activity displays.

     If you close a window or console, the Vault stops. Phoenix DEM does not operate without running Vaults.

     File - Events are logged to a file. With this option, type the file name to store the events, or select a location from the Event Log Pathname dialog box by clicking the **Browse** button.

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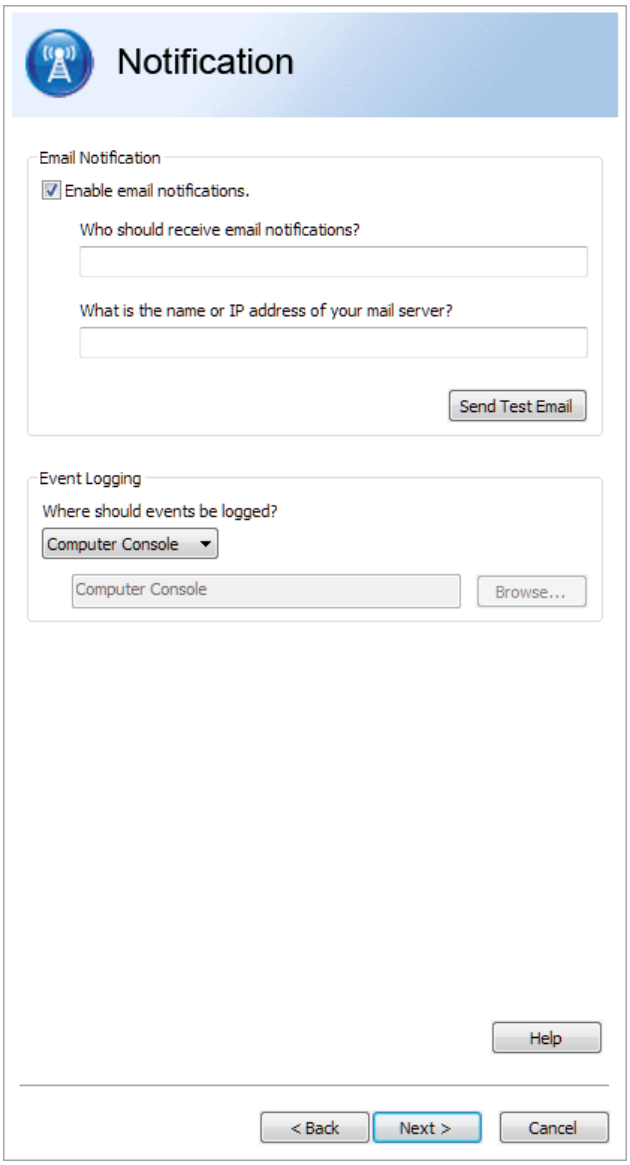

8. Click **Next** for the Ready to Add window. The Ready to Add window displays a summary of the Vault values. See the corresponding header for your storage device type:

Hard Disk Summary

- Review the displayed summary and ensure all the values are correct. If information is incorrect, click the **Back** button to navigate through previous wizard windows to edit.

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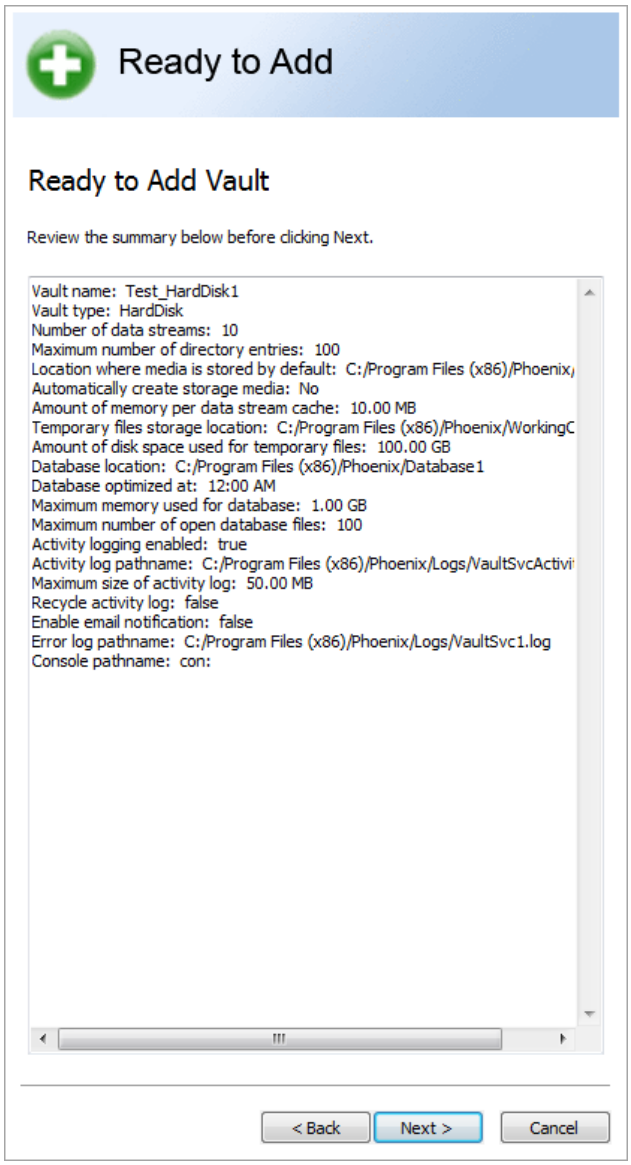
Ready to Add
Ready to Add Vault
Review the summary below before clicking Next.
Vault name: Test_HardDisk1
Vault type: HardDisk
Number of data streams: 10
Maximum number of directory entries: 100
Location where media is stored by default: C:/Program Files (x86)/Phoenix/
Automatically create storage media: No
Amount of memory per data stream cache: 10.00 MB
Temporary files storage location: C:/Program Files (x86)/Phoenix/WorkingC
Amount of disk space used for temporary files: 100.00 GB
Database location: C:/Program Files (x86)/Phoenix/Database1
Database optimized at: 12:00 AM
Maximum memory used for database: 1.00 GB
Maximum number of open database files: 100
Activity logging enabled: true
Activity log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvcActivi
Maximum size of activity log: 50.00 MB
Recycle activity log: false
Enable email notification: false
Error log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvc1.log
Console pathname: con:
< Back
Next >
Cancel

Tape Library Summary

- Review the displayed summary and ensure all the values are correct. If information is incorrect, click the **Back** button to navigate through previous wizard windows to edit.

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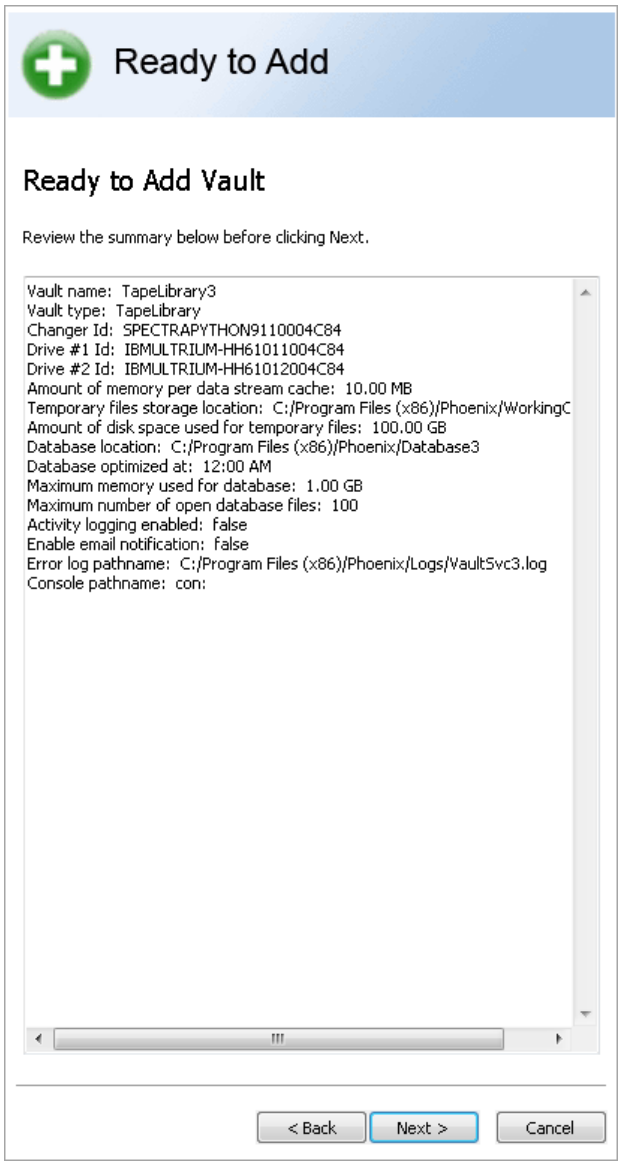
Ready to Add
Ready to Add Vault
Review the summary below before clicking Next.
Vault name: TapeLibrary3
Vault type: TapeLibrary
Changer Id: SPECTRAPYTHON9110004C84
Drive #1 Id: IBMULTRIUM-HH61011004C84
Drive #2 Id: IBMULTRIUM-HH61012004C84
Amount of memory per data stream cache: 10.00 MB
Temporary files storage location: C:/Program Files (x86)/Phoenix/WorkingC
Amount of disk space used for temporary files: 100.00 GB
Database location: C:/Program Files (x86)/Phoenix/Database3
Database optimized at: 12:00 AM
Maximum memory used for database: 1.00 GB
Maximum number of open database files: 100
Activity logging enabled: false
Enable email notification: false
Error log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvc3.log
Console pathname: con:
< Back
Next >
Cancel

Standalone Tape Drive Vault Summary

- Review the displayed summary and ensure all the values are correct. If information is incorrect, click the **Back** button to navigate through previous wizard windows to edit.

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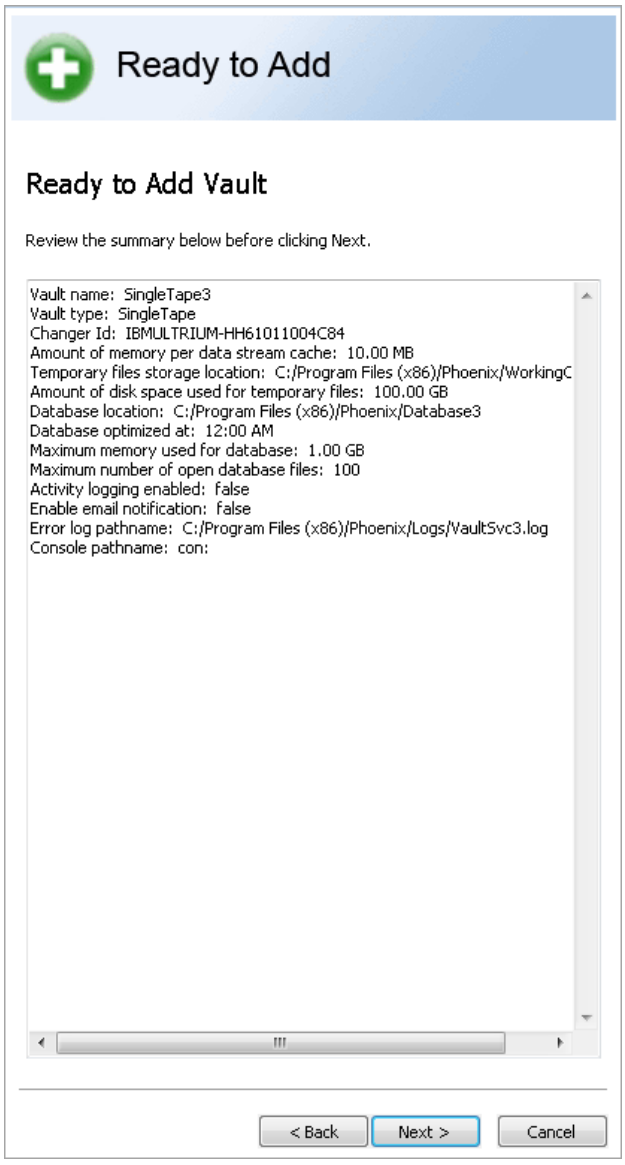
Ready to Add
Ready to Add Vault
Review the summary below before clicking Next.
Vault name: SingleTape3
Vault type: SingleTape
Changer Id: IBMULTRIUM-HH61011004C84
Amount of memory per data stream cache: 10.00 MB
Temporary files storage location: C:/Program Files (x86)/Phoenix/WorkingC
Amount of disk space used for temporary files: 100.00 GB
Database location: C:/Program Files (x86)/Phoenix/Database3
Database optimized at: 12:00 AM
Maximum memory used for database: 1.00 GB
Maximum number of open database files: 100
Activity logging enabled: false
Enable email notification: false
Error log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvc3.log
Console pathname: con:
< Back
Next >
Cancel

Veracity Coldstore Summary

- Review the displayed summary and ensure all the values are correct. If information is incorrect, click the **Back** button to navigate through previous wizard windows to edit.

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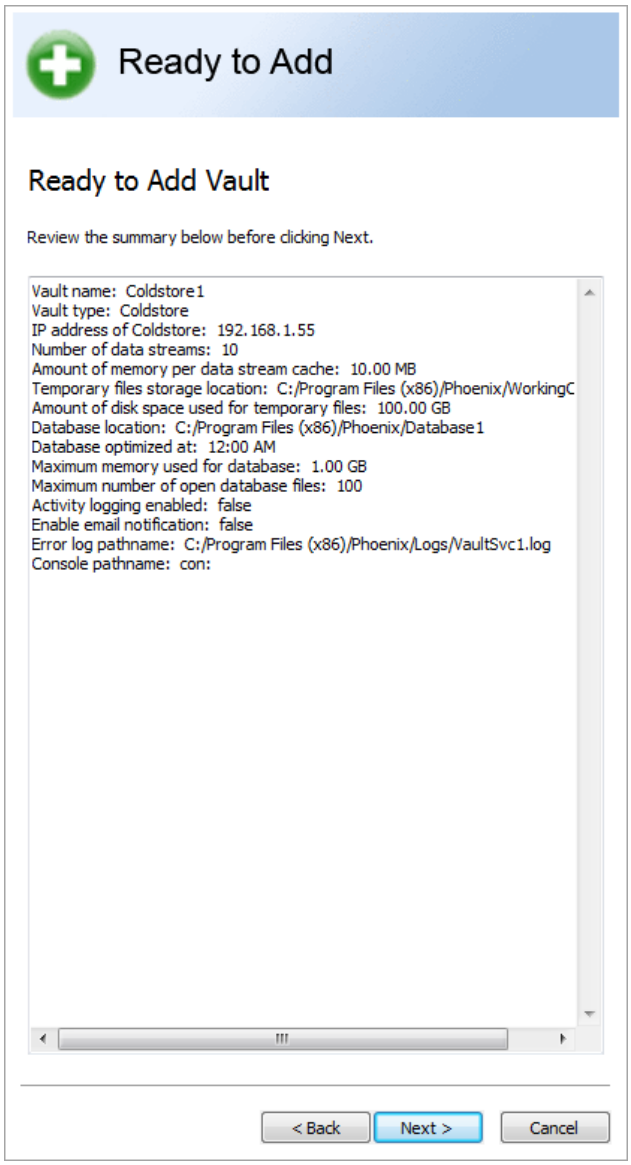
Ready to Add
Ready to Add Vault
Review the summary below before clicking Next.
Vault name: Coldstore1
Vault type: Coldstore
IP address of Coldstore: 192.168.1.55
Number of data streams: 10
Amount of memory per data stream cache: 10.00 MB
Temporary files storage location: C:/Program Files (x86)/Phoenix/WorkingC
Amount of disk space used for temporary files: 100.00 GB
Database location: C:/Program Files (x86)/Phoenix/Database1
Database optimized at: 12:00 AM
Maximum memory used for database: 1.00 GB
Maximum number of open database files: 100
Activity logging enabled: false
Enable email notification: false
Error log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvc1.log
Console pathname: con:
< Back
Next >
Cancel

9. When ready to add the new Vault, click **Next**.

    - Mac users will be prompted for an Administrator Name and Password. The Name field may already be populated with the name of the user running the Vault Wizard.

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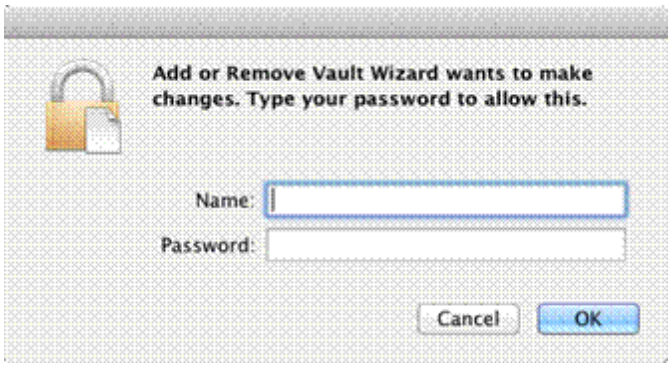

- After entering a Name and Password, click **OK**. The Vault will start immediately.

A restart is not required on a Mac.

10. In the Completed window, click **Finish** to exit the Add or Remove Vault Wizard. Restart the computer for the new Vault activation. To add another Vault or remove a Vault, launch the Add or Remove Vault Wizard again.

If you do not restart your computer, the new Vault does not start and is not available for use.

11. The next step is to prepare your media using Vault Admin. See Prepare Media and Vault Admin.

Disable SCSI Devices

If you are using Windows Vista or newer, or Windows Server 2008 or newer, you do not need to disable the use of SCSI devices.

Disable the use of SCSI devices in a Windows environment to ensure that Windows does not interfere with Phoenix DEM's management of SCSI tape drives and libraries (Medium Changers). This is done through the Windows Device Manager.

- This procedure only disables Windows use of the device and does not affect Phoenix DEM's use of the device.
- Devices that are active (not disabled) in Windows are not visible or used by Phoenix DEM.

Access the Device Manager

1. Click **Start** on the Windows desktop.
2. Right-click **My Computer** and select **Manage** from the shortcut menu. The **Computer Management** window appears.
3. In the left pane of Computer Management, click **Device Manager**:

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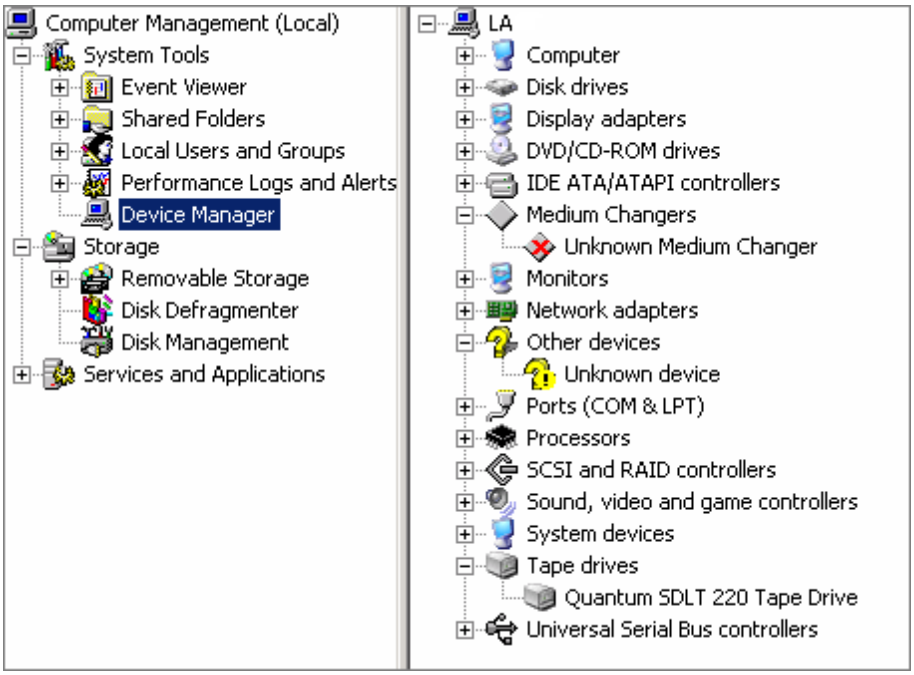

5. In the right pane, find the tape drive or tape library installed on the computer.

6. Right-click the tape drive, and then select **Properties**.

If running a tape library, be sure to disable the tape library (Medium Changers) and the actual tape drives in the library. Repeat the disabling process for each tape drive within the library.

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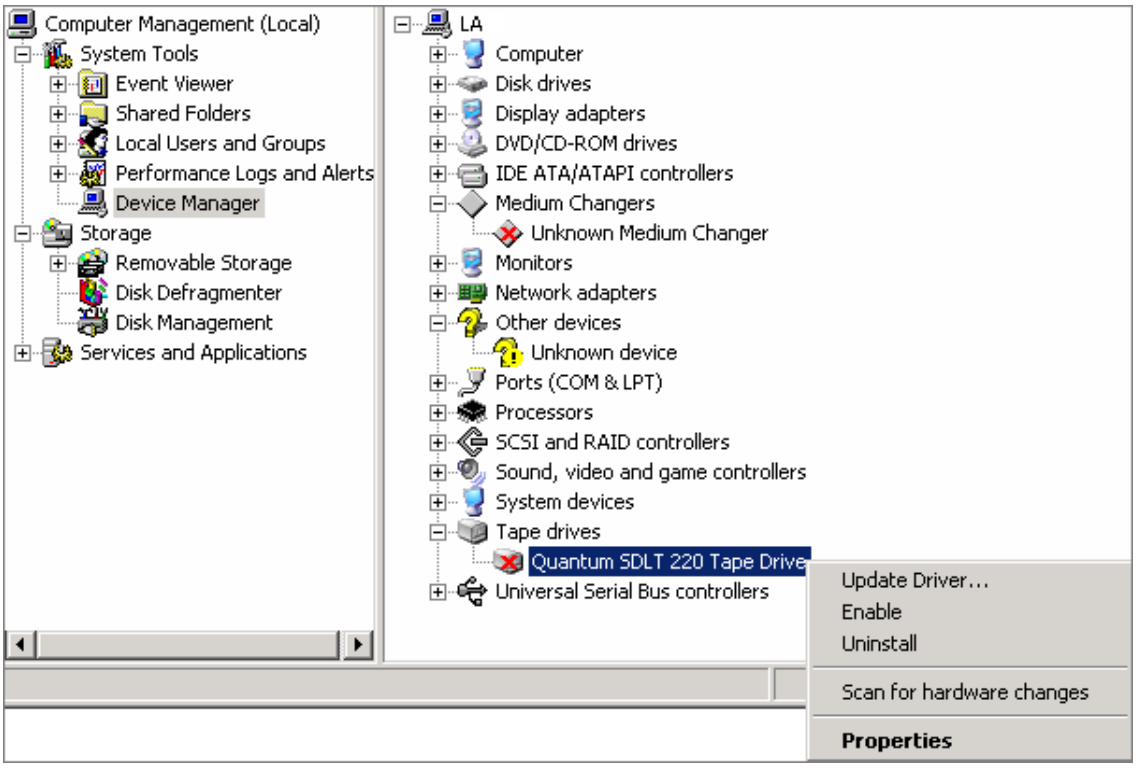
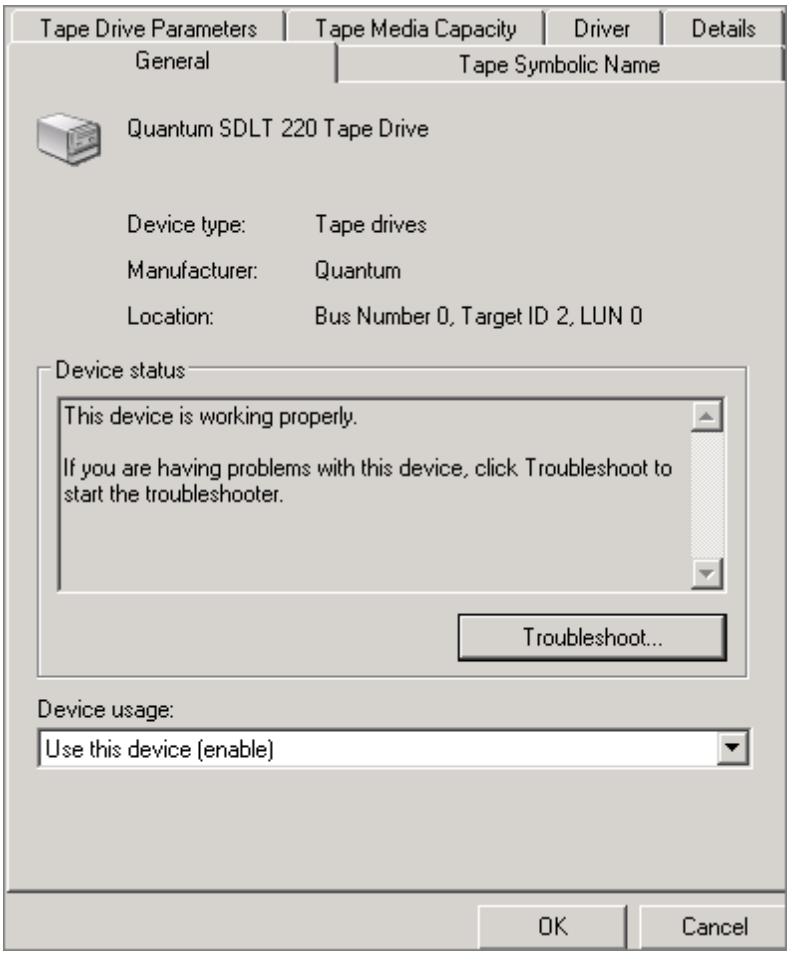


7. The **Tape Drive Properties** window appears:



8. Under **Device Usage**, click the down arrow, and select **Do not use this device (disable)**.
9. Click **OK**. The **Tape Drive Properties** window closes, and the icon for the device in the right pane of **Computer Management** should now have ✗ superimposed on it to show the tape drive is disabled.

Vault Admin

Use Vault Admin and the Vault Service to administrate added Vaults, manage video and storage, and to prepare media and manage media on your network. The Vaults can use different types of media to store all your video and data assets. The Vault Admin application can be installed anywhere and it can be used anywhere on the network.

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A Vault must be configured and running, and media must be prepared in order to do any other task.

To access the Vault Admin, from your suite of product applications open the Vault Admin application (VaultAdmin.exe).

Vault Admin window

Vault Admin is divided into two main panes, and it has toolbar buttons across the top of the window. Most Phoenix DEM applications require you to interface through tab options, but with Vault Admin you use the menu items or toolbar. The left pane displays a list of the tracked Vaults and views, like a common file manager application. The right pane displays details for the object select from the left pane. The toolbar consists of the following buttons:

- Open Vault Stats for monitoring detailed Vault activity.

- Open Mini Vault Stats for monitoring basic Vault activity.

- Open the Vault Security dialog box. To secure a Vault means to lock it so no further media can be added to it.

- Open the Shut Down Vault dialog box for assigning a Vault offline. Take Vaults offline before performing any type of maintenance to the hardware where a Vault resides.

- Open Change Vault Properties. Define Vaults, devices, databases, licensing, diagnostics, notifications, logs, and security settings for Vaults.

- Open Vault Checkup. Run a Vault checkup to check the general health of a Vault.

- Open the Load Media dialog box. Bring previously prepared media back online.

- Open the Prepare Media dialog box. Prepare new or previously used media.

- Open the Unload Media dialog box. Media can be removed from the Information Repository or labeled as offline, and be tracked by the Information Repository.

- Open the Erase Media dialog box. Remove all data from a unit of media without reformatting the media.

- Refresh the view of the currently displayed data; update the information in the Vault Admin.

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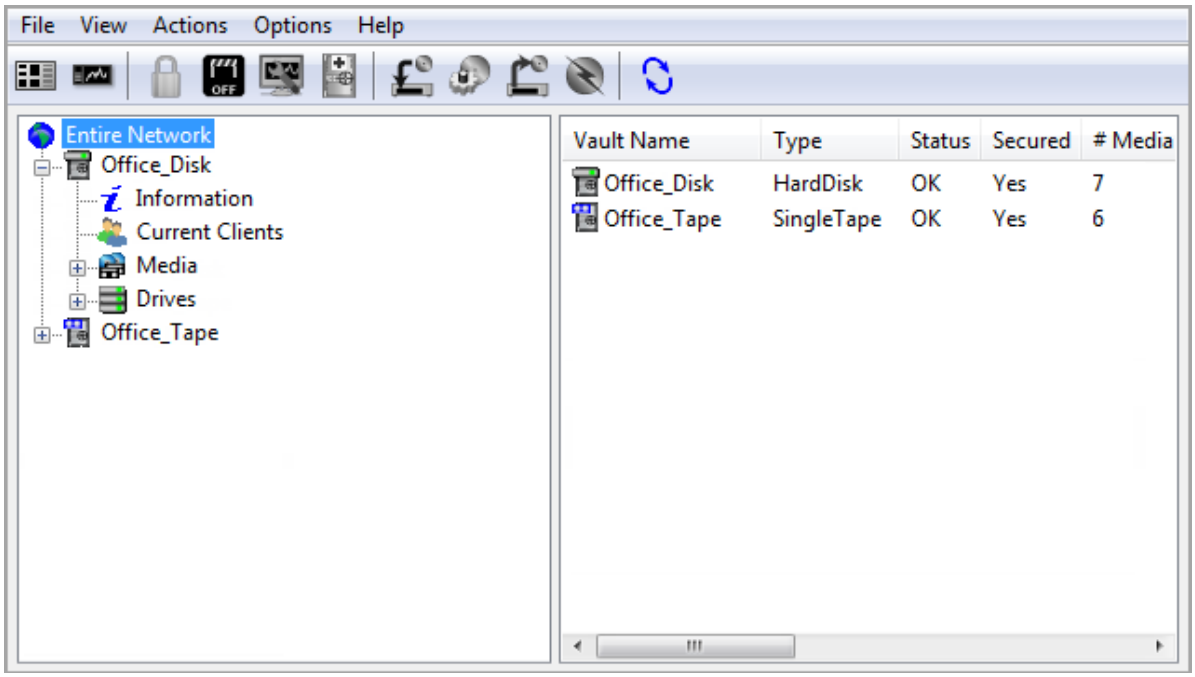

When performing Vault and media operations, the software may appear as if it is not responding. When the given task is completed, it responds normally.

Users that have unlimited rights and access to Vault resources are: UNIX "root". Windows "local group administrators", and Windows "backup operators".

Vault Admin Menu Items

Menu Items	Description
File > Extended Metadata	**Import from** - The Import from window opens. Navigate to the MetadataExtensions.cfg file that you wish to import. Click **Open**. **Export to** - The Export to window opens. Navigate to the location where you want to export the MetadataExtensions.cfg file. Click **Save**.
File > Exit	Close the application.
View > Enable toolbar	Check mark by this menu item indicates that the toolbar is displayed.

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Menu Items	Description
View > Enable Advanced	Select to access advanced options for a Vault item. This advanced mode displays a couple of details: **Volume** - This details volume information on media if the media has more than one volume associated with it. For example, a data tape might store data on both sides of the tape, presenting two volumes of media storage. If advanced mode is selected a Volume icon displays with Vault sub-items in the Vault Admin left pane. **Shut down notifications** - In advanced mode, shut down methods present notifications of each event, which are time stamped and indicate the name of the Vault. (Not using advanced mode only displays one generic notification regardless of multiple events.)
View > Enable Tool Tips	Check mark by this menu item indicates that tool tips for the window display. The tips are brief descriptions of window controls that are displayed if the mouse pointer is moved over a control. De-select to turn tool tips off.
View > Refresh	Refresh the view of system information.
Actions > Vault Stats	Open Vault Stats for monitoring detailed Vault activity.
Actions > Mini Vault Stats	Open Mini Vault Stats for monitoring basic Vault activity.
Actions > Secure/ Unsecure Vault	Open the Vault Security dialog box. To secure a Vault means to lock it so no further media can be added to it.
Actions > Shut Down Vault	Open the Shut Down Vault dialog box for assigning a Vault offline. Take Vaults offline before performing any type of maintenance to the hardware where a Vault resides.
Actions > Change Vault's Properties	Open Change Vault Properties. Define Vaults, devices, databases, licensing, diagnostics, notifications, logs, and security settings for Vaults.
Actions > Vault Checkup	Open Vault Checkup. Run a Vault checkup to check the general health of a Vault.
Actions > Load Media	Open the Load Media dialog box. Bring previously prepared media back online.
Actions > Prepare Media	Open the Prepare Media dialog box. Prepare new or previously used media.

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Menu Items	Description
Actions > Unload Media	Open the Unload Media dialog box. Media can be removed from the Information Repository or labeled as offline, and be tracked by the Information Repository.
Actions > Erase Media	Open the Erase Media dialog box. Remove all data from a unit of media without reformatting the media.
Options > Address Format	Address format refers to the format that client addresses are displayed in the Vault Admin. Change the Address Format to see Current Client addresses displayed in a different format. • Select one of the following address format view options: **Dot Notation** - The client's computer network address is displayed. **Full Domain Name** - The client computer is displayed along with the domain and subnet names. **Host Name Only** - The client's host name and port number are displayed. Use the **Refresh** button to redisplay the active clients. Right-click in the active window to activate the button.
Options > Communications Timeout	If unable to connect with a computer on the network or communications are interrupted during a job, Phoenix DEM waits a predefined period of time before completely dropping the connection. This period of time is called the communications timeout. Set a higher or lower timeout wait value to better suit network conditions should communications between components fail or hang during a job. • Select a timeout value for the Information Repository, 0 being shortest, 3 the default, 9 being longest, and 10 never. All values are relative. The communications timeout value can impact the performance of other components.
Help > Current Page	Open online help to the Vault Admin webpage.
Help > Vault Admin Overview	Open online help with focus on Vault Admin.

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Menu Items	Description
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open the support webpage.
Help > About Vault Admin	Open the About Vault Admin window.

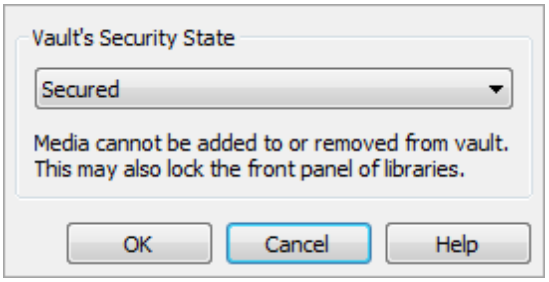
Vault Secure or Unsecure

Use the Vault Security dialog box to protect your Vaults in your Information Repository. Vaults should normally be run in a secured mode, where a Vault's media cannot be manipulated. Media cannot be imported or exported, copied, reformatted, or even relabeled. In Vaults equipped with storage devices that can be locked via software, the front panel and all access panels are locked when the Vault is operating in secure mode.

Before any media operation can be performed, such as preparing media, a Vault must be unsecured.

Secure or Unsecure a Vault

1. From the Vault Admin left pane, select a Vault name.
2. From the toolbar, click the **Secure/Unsecure Vault** button.



3. From the Vault Security dialog box, use the drop-down list to select either **Secured** or **Unsecured**.

   Secured - Media may be added to and removed from a Vault based on access rights to the media.

   Unsecured - Media cannot be added or removed from Vault. This may also lock the front panel of libraries.

4. Click **OK** to complete the process.

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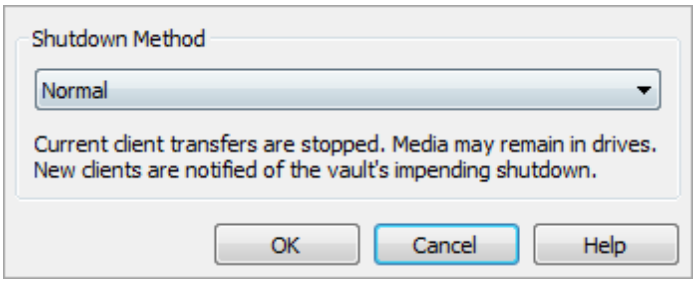
Vault Shutdown or Restart

Use the Shut Down Vault dialog box to shut down or restart a selected Vault. Shutting down a Vault must be performed before you can modify the Vault's host computer.

Shut Down or Restart a Vault

1. From the Vault Admin left pane, select a Vault name.
2. From the toolbar, click the **Shut Down Vault** button.



3. From the Shut Down Vault dialog box, use the **Shutdown Method** drop-down list to select between three ways to shut down a Vault and one way to restart a Vault.

   Normal - Normal shutdown is the standard way to shut down a Vault. A Normal shutdown stops current client activity after the running transaction completes all database transactions and performs any cleanup activity required, but it does not remove media from the drive. A Vault restarted after a normal shutdown should not report errors.

   Extended - Extended shutdown is the best way to shut down a Vault if it is going to be taken offline for an extended period of time. Phoenix DEM waits until running client processes are finished before closing connections to clients, and then completes all database transactions, removes media from drives, and performs any required cleanup activity. An Extended shutdown is more time consuming than a Normal shutdown.

   Restart - Restart executes a Normal shutdown and then restarts the selected Vault. Client activity stops after the running transaction completes all database transactions and performs any cleanup activity required, but does not remove media from the drive.

   Emergency - Use only for emergencies. The emergency shutdown behaves as if removing power from the host computer. A Vault restarted after an emergency shutdown may report connection timeouts, incomplete database translations, and other items.

4. Click **OK** to complete the process.

Vault Properties

After Vault installation, use Vault Properties to change Vault settings. Properties to modify includes general settings, security, logs, notifications, diagnostics, memory allocation for devices, database optimization parameters, and licensing.

To access Vault Properties:

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1. Open the Vault Admin application. In the left pane of the Vault Admin main window, select a Vault to modify.

2. From the Vault Admin toolbar, click the **Change Vault's Properties** button to launch the <Vault Name> Properties window, or right-click on the selected Vault name and select **Properties**. The Properties window features several tabs; each responsible for some aspect of Vault functionality. It opens to the **General** tab.

Vault Properties opens to the **General** tab by default. From the following tabs, select one to bring its properties into focus for modification:

- **General** - Rename the Vault and view the Vault type and status information, including location, software version, and start time.
- **Device** - View SCSI information for Vaults as well as maximum files kept in a directory and maximum number of data streams. Also, change the amount of virtual memory used for each data stream cache for Vaults.
- **Database** - View the database path. Also, change the time when the database is optimized, set the number of maximum open files, and set the amount maximum virtual memory used.
- **License** - Access your Host Id and view installed licenses and license summary. Activate a product key, and change, delete or import a license file.
- **Security** - Define Vault access for users, groups, and domains.
- **Logs** - Activate activity logging, define an activity log path, set maximum log size, set what action to take when logs reach their maximum size, and define where error logs go.
- **Notifications** - Set where events and e-mail notifications are sent.
- **Diagnostics** - Define where output messages are sent, the type of messages sent, and the level of message detail.

Vault Properties General Tab

Use the Vault Properties **General** tab to change the overall settings of a Vault. Here, you can modify the Vault name and view the Vault type, location, software version of Phoenix DEM, and Vault start time.

Access this from Vault Properties by clicking the **General** tab.

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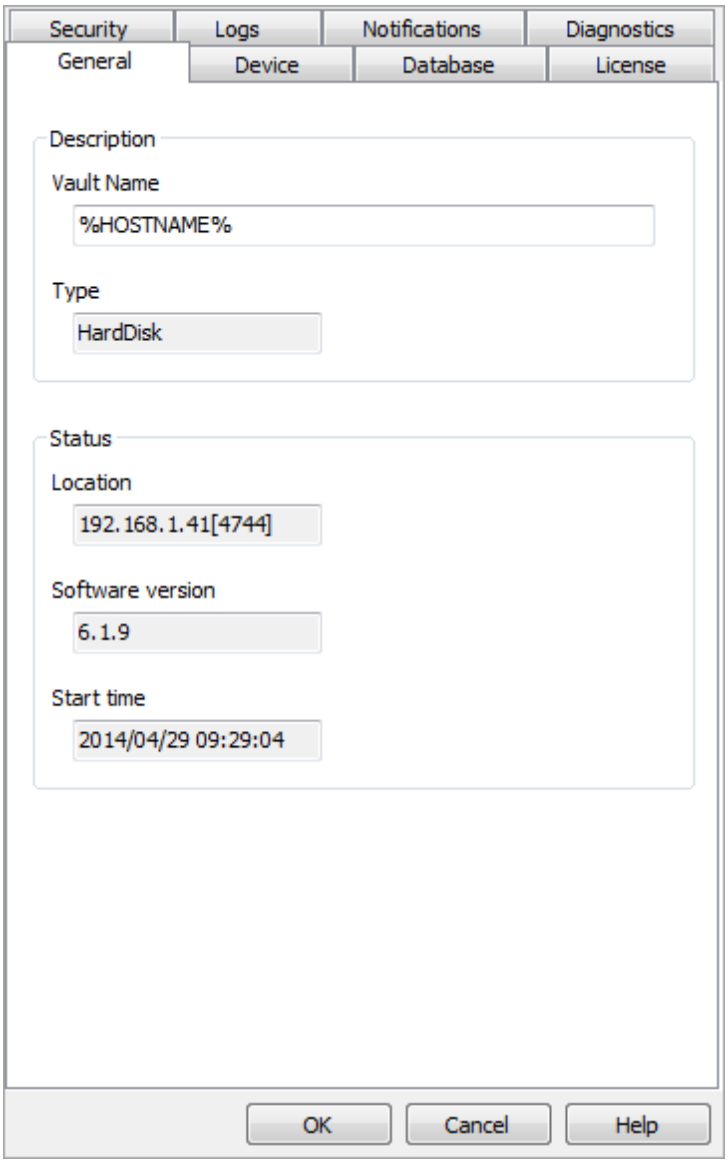

1. Change the selected Vault's name, and type a new name in the **Vault Name** box.
2. Click **OK**, and the new Vault name is listed under **Entire Network** in the Vault Admin left pane.

General Tab Elements

Element	Description
Vault Name	The name of the Vault. You can change the name of the Vault at any time. The entered name appears in the Vault Admin left pane under **Entire Network**.

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Element	Description
	Rather than hard coding a Vault Name, use the variables **%HOSTNAME%** and **%TYPE%**. **%HOSTNAME%** is replaced by the computer name and **%TYPE%** is replaced by the type of Vault.
Type	Read only box, displaying the type of device.
Location	Read only box, displaying the IP address of the device.
Software version	Read only box, displaying the software version of Phoenix DEM.
Start time	Read only box, displaying the time when the Vault was first started.

Vault Properties Device Tab

Use the **Device** tab to change the selected Vault's storage connection resource settings. The values displayed on this tab change depending on if you've selected a hard disk Vault, shadow Vault, or a data tape Vault.

Access this from Vault Properties by clicking the **Device** tab.

1. Select preferred Vault values.
2. Click **OK** to save new settings.

Hard Disk Vault

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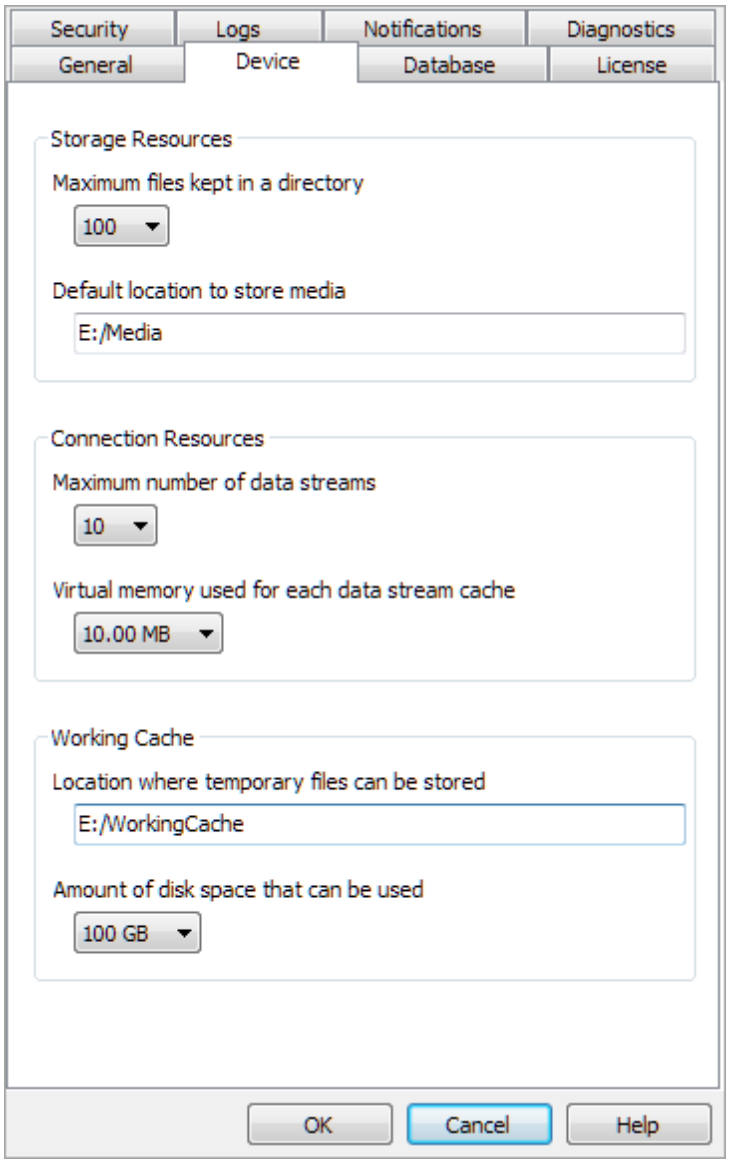

Data Tape Vault

On the **Device** tab for data tape Vaults, change only the amount of virtual memory used for each data stream cache.

SCSI device is a read only box. It indicates the hardware in use and where it is located on the network.

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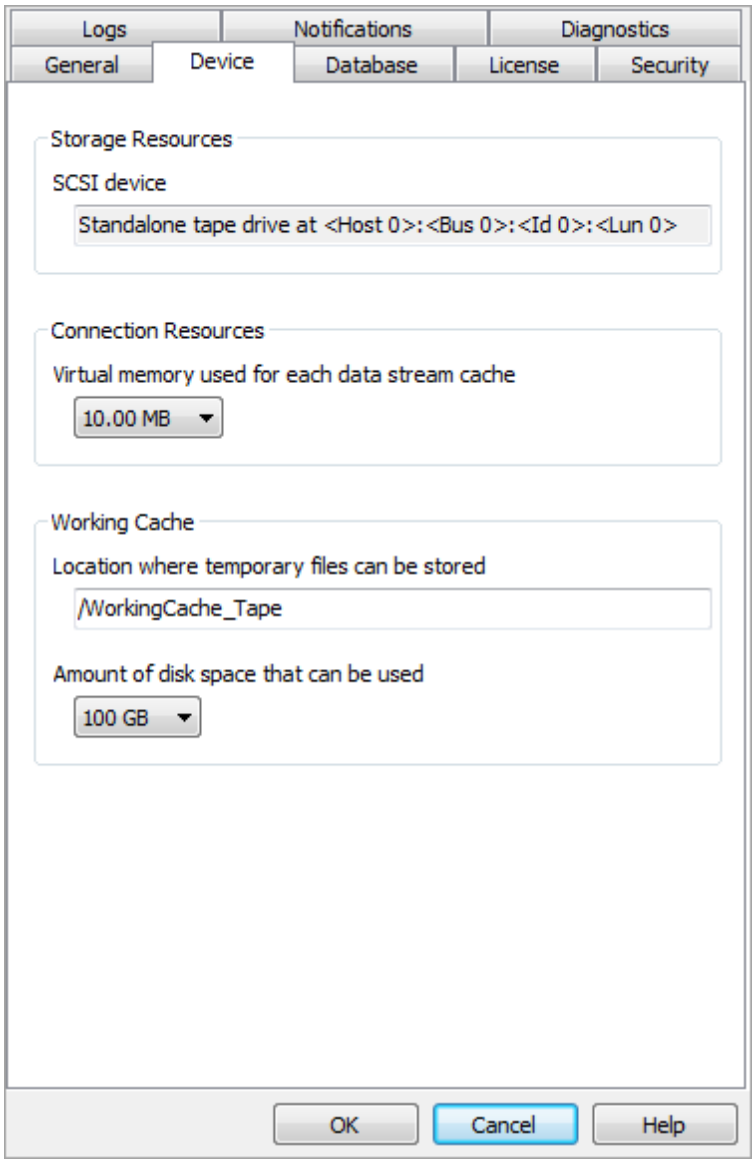
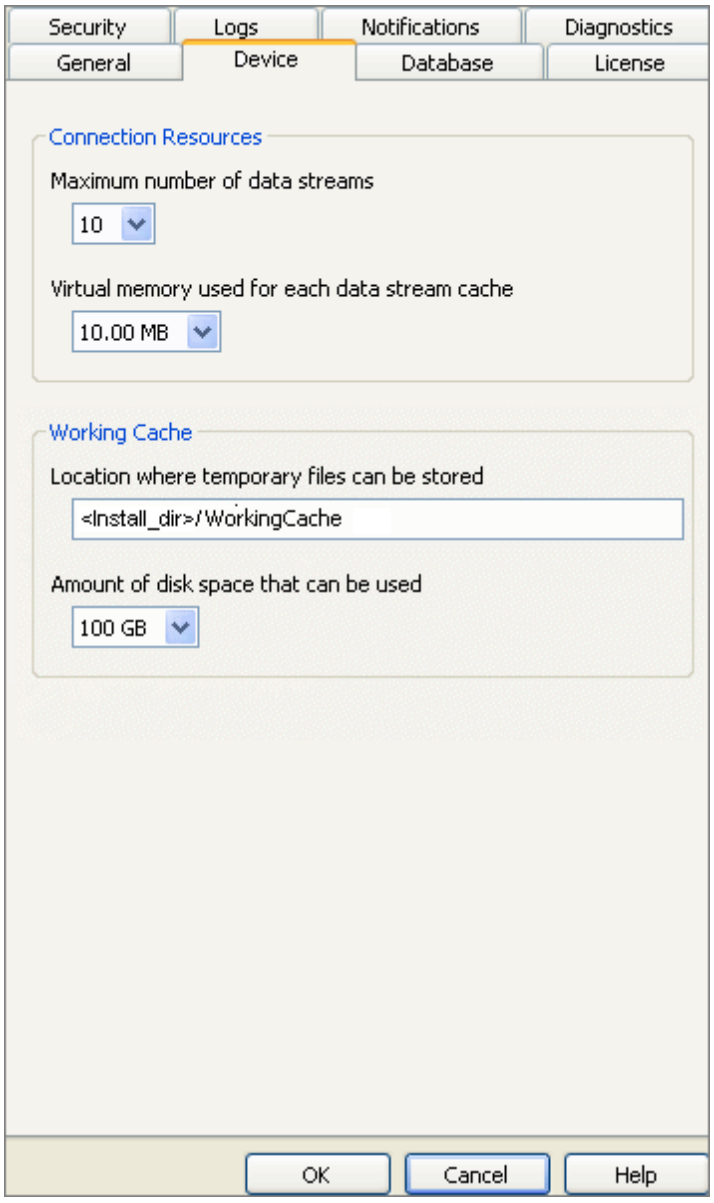


Shadow Vault

© 2015



Device Tab Elements

Use this table to help change the values for the appropriate Vault type. Note that not all elements are available for each type of Vault.

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<table>
<tr><th>Element</th><th>Description</th></tr>
<tr><td>Maximum files kept in a directory</td><td>Data is stored in files in the Vault. More files allow more storage per unit of media, but also slow down Information Repository performance. Select a value to meet but not exceed your needs. The following details the number of files that correlates with each value.
<table>
<tr><th>Value</th><th>Number of Files</th></tr>
<tr><td>50</td><td>125 billion</td></tr>
<tr><td>100</td><td>250 billion</td></tr>
<tr><td>150</td><td>375 billion</td></tr>
<tr><td>200</td><td>500 billion</td></tr>
<tr><td>300</td><td>750 billion</td></tr>
<tr><td>400</td><td>1 trillion</td></tr>
<tr><td>500</td><td>125 trillion</td></tr>
</table></td></tr>
<tr><td>Default location to store media</td><td>Define a default location where media is stored and managed. Whenever there is an option to use a default location, Phoenix DEM uses this path.</td></tr>
<tr><td>Maximum number of data streams</td><td>The number of connections that can be made to a Vault simultaneously. Having several connections enables several clients to communicate with the Vault at once; more streams demand greater requirements for processing power. Range:1 - 50.</td></tr>
<tr><td>Virtual memory used for each data stream cache</td><td>Define how much virtual memory is set aside for incoming and outgoing data during file storage and retrieval. A larger cache may improve performance, at the expense of using more virtual memory. The total amount of space used equals the number of data streams multiplied by the selected cache size.

For example, with 10 data streams and 10 MB of cache, the Vault sets aside 100 MB of total virtual memory for caching data. A selection of 10 MB is usually sufficient. Range: 5, 10, 15, 20 MB.</td></tr>
</table>

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Element	Description
Location where temporary files can be stored	Define where the working cache is located. The default location is '<install-dir>/WorkingCache'. When processing files, Phoenix DEM may create temporary files, which enable fast, efficient work and are important for clipping video files. Temporary files are kept in the working cache. Any changes will override the values entered when you first added the Vault using the Add or Remove Vault Wizard.
Amount of disk space that can be used	Define the amount of disk space permitted to use for the working cache. Range: 10 - 900 GB

Vault Properties Database Tab

Use the **Database** tab to allocate resources for a Vault database. Select when a Vault is optimized, the maximum number of files to open at a single time, and the amount of virtual memory the Vault uses.

Access this from Vault Properties by clicking the **Database** tab.

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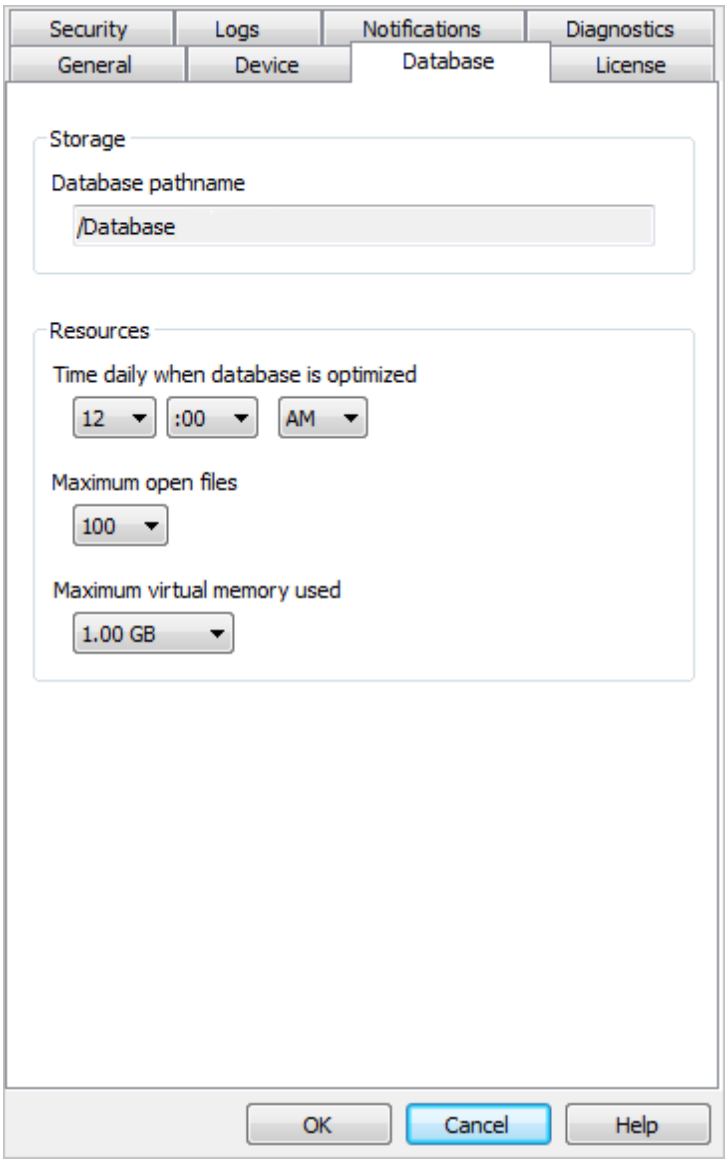

1. Select preferred Vault values.
2. Click **OK** to save new settings.

Database Tab Elements

Element	Description
Database pathname	Defined when installing a Vault. It indicates the location where the database is stored on the host computer's hard disk.

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Element	Description
Time daily when database is optimized	Set how often the database is optimized to ensure that the Information Repository continues to function at its full potential. It is recommended to optimize the database for every Vault daily.
Maximum open files	Limit how many files can be open simultaneously. Having more files open allows for faster searches, but requires more Information Repository resources. Range: 10 - 500
Maximum virtual memory used	Limit how much virtual memory the database uses. For best Information Repository performance, select a value that does not exceed 75% of the physical memory on the computer. Range: 256 MB - 2 GB

Vault Properties License Tab

Get a licensed product from SoleraTec. You can purchase a licensed product online or download a trial version from SoleraTec's website. By default, this product comes with a seven day evaluation license. At the end of the evaluation period, you can request an extended evaluation product key or purchase a product license through the same sales channels. For more information see Product Licensing.

If you run the software longer than seven days with an evaluation license, your Vaults will shut down. Until a license is purchased and added, the Vaults run in increments of only two hours.

From Vault Properties, use the **License** tab to manage Vault licenses.

- The **Summary** group displays your license totals for the selected Vault.
- The **Host Id** group displays the Vault Host Id. The Host Id information is used to activate your product key.
- The **Installed Licenses** group displays all the individual licenses assigned to a Vault. The license statistics shown are Serial #, Type, Capacity, Expiration, Product Type, and Platform Type. Click the **Add** button to open the Add License window where you can add a new license by activating a product key, or import a license file. Select an installed license from the group and then click the **Delete** button to remove the license from the Vault.

Once the **Add** or **Delete** button is clicked, the changes are immediate.

You can add the same license as many times as you like, but the Vault Admin just overwrites the license file so only one instance is displayed in the **Installed Licenses** group.**Add license and activate product key - Connected to Internet**

Once you have received your product key, and you are connected to the Internet, follow the steps below to activate your license.

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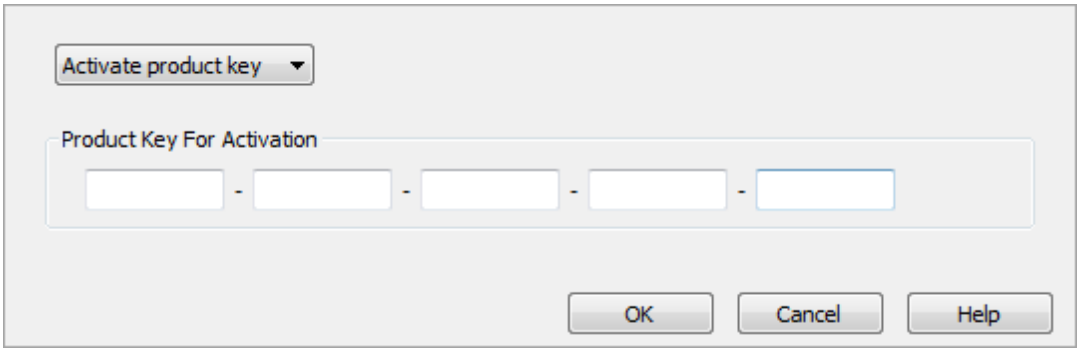
1. Open the Vault Admin application. In the left pane of the Vault Admin main window, select a Vault to modify.
2. From the Vault Admin toolbar, click the **Change Vault Properties** button to launch the <Vault Name> Properties window, or right-click on the selected Vault name and select **Properties**. The Properties window features several tabs; each responsible for some aspect of Vault functionality. It opens to the **General** tab.
3. Select the **License** tab.
4. Click the **Add** button. When the Add window appears, select **Activate product key** drop-down menu. Begin typing the product key into the appropriate boxes, or copy and paste the product key into the first box. It will propagate the appropriate boxes automatically.

When using Mac, the copy and paste action is not carried out properly. To ensure the product key is entered correctly, manually type in the product key to the appropriate box.



Add license and activate product key - Not connected to Internet

If you have received a product key, and are not connected to the internet, follow these steps:

1. Find a computer with internet access.
2. Go to SoleraTec's website and locate the product key activation page.
3. Type your Host Id, e-mail, and product key. The Host Id is located in Phoenix DEM, from the <Vault Name> Properties > **License** tab, as shown in the image below. The product will run for up to two hours regardless of license status, so you still have access to the Vault Admin. You may need to reboot your computer to initiate the product.

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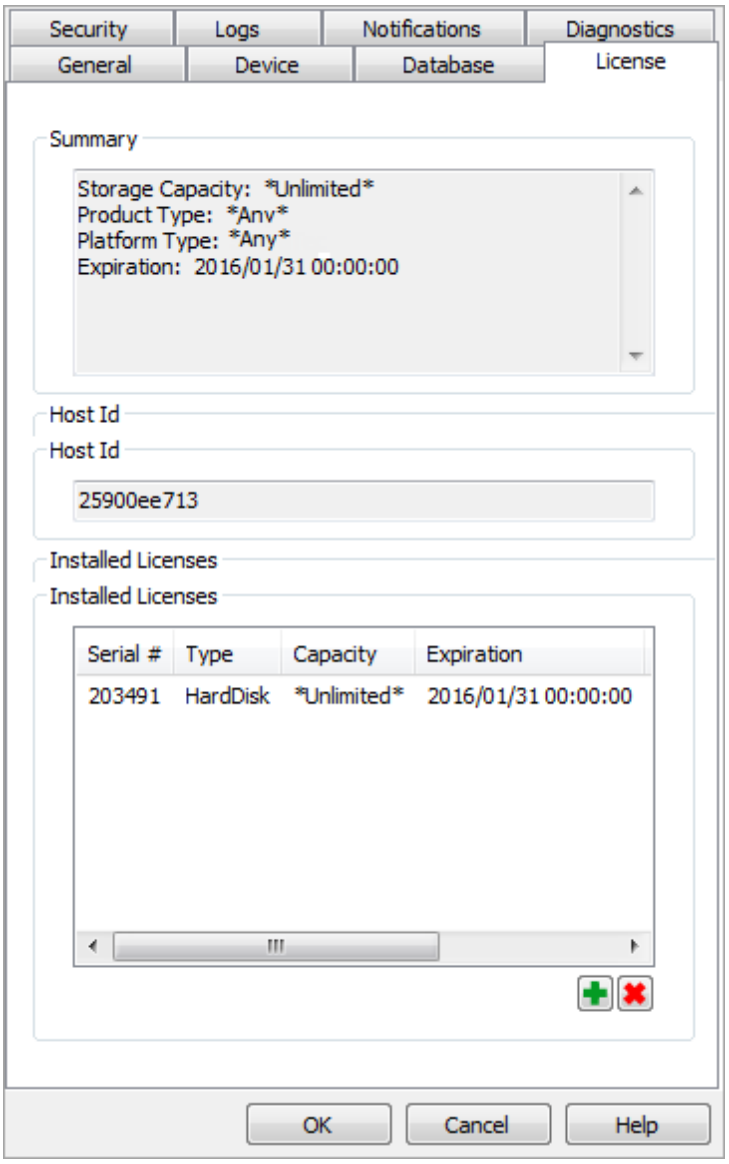

4. A license file will be sent to you via e-mail.

5. After receiving the license file, from <Vault Name> Properties > **License** tab, click the **Add** button.

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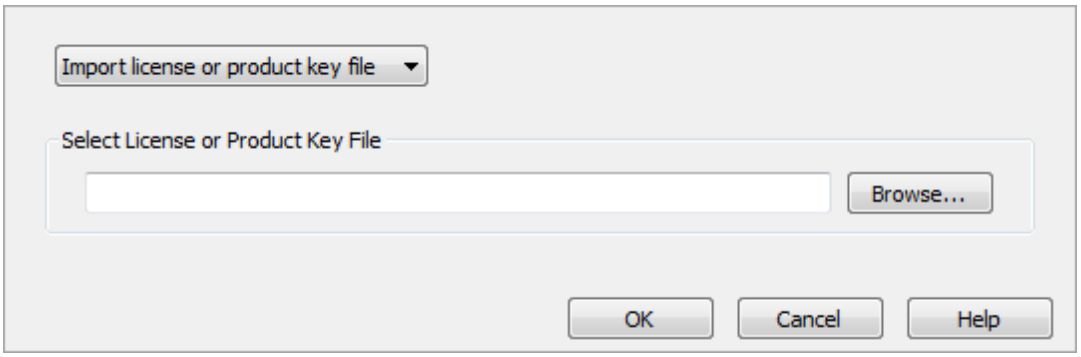

6. From the Add License window, select **Import license or product key file** from the drop-down menu.
7. Type, or click the **Browse** button to navigate to the received license file, **.lic**, or a product key file, **.pk**.
8. Click **Ok** to complete manual activation.

If you are having problems activating your license, visit the SoleraTec website for manual activation.

Licensing options on website

Download - Select a product and download it with an evaluation license, which is good for seven days.

Purchase - If connected to the internet, buy a product. This provides you with a product key. Once the product key is entered into the product key information, it pulls a license file to your machine and activates it automatically.

Activate - Use if you already have a product key and your computer is not connected to the internet. Find a computer with internet access and submit your Host Id. A license file will be sent to you to import it into the product.

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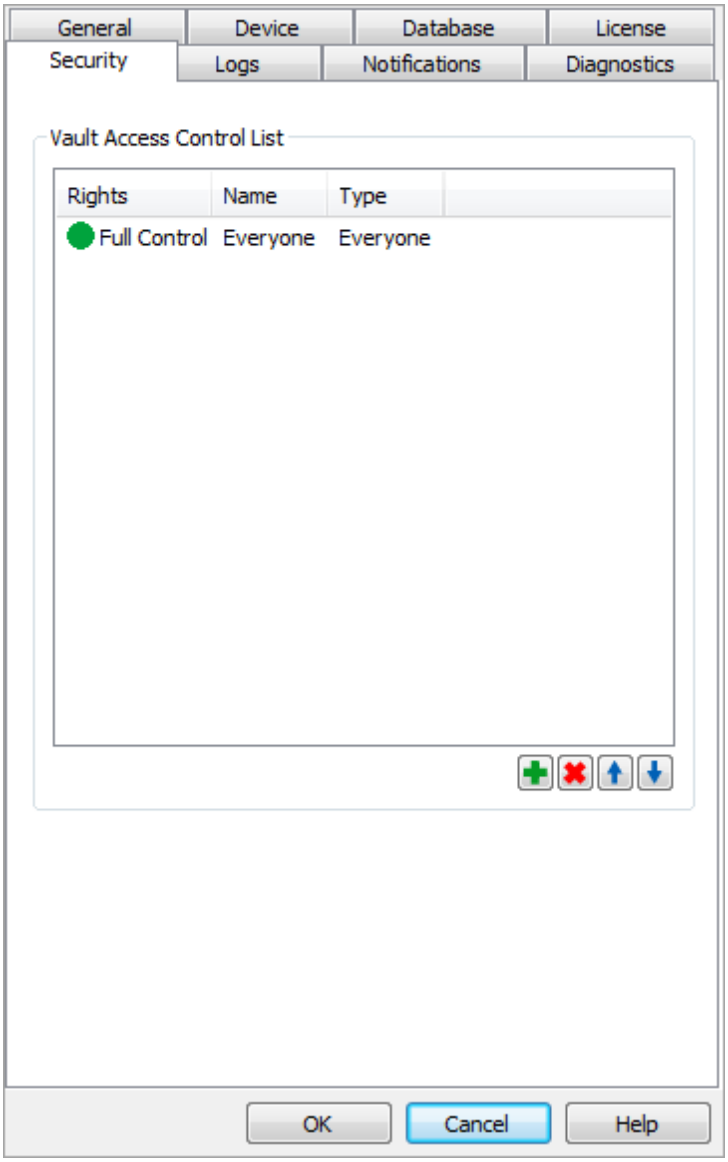
Vault Properties Security Tab

Use the **Security** tab to add, change, and delete user, group, and domain rights for the selected Vault. Vault rights override media rights, see Prepare Media.

Access this from Vault Properties by clicking the **Security** tab.



1. Add, change, or delete security rights.
2. Click **OK** to save new settings.

Security Tab Elements

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Element	Description
Vault Access Control List	Click on a right in the list to select it, or double-click on a right for the Change Entry window. View the columns: **Rights** - The level of rights given to user, group, domain, or everyone. ● - Indicates full rights. ◓ - Indicates rights to store and retrieve data. ○ - Indicates rights to retrieve (but not store) data. ✕ - Indicates no rights. **Name** - Name of the user, group, domain, or everyone. **Type** - The Type of rights.
(**Add** button)	Open the Add Entry dialog box. Use to add a new user, group, domain, or "everyone". See **Add Entry** section below.
(**Delete** button)	Remove the selected right from the Vault Access Control list.
(**Up** button)	Move the selected right up one line in the Vault Access Control list.
(**Down** button)	Move the selected right down one line in the Vault Access Control list.

Add Entry

Use the Add Entry dialog box to add a new user, group, domain, or everyone.

1. Click the **Add Entry** button.

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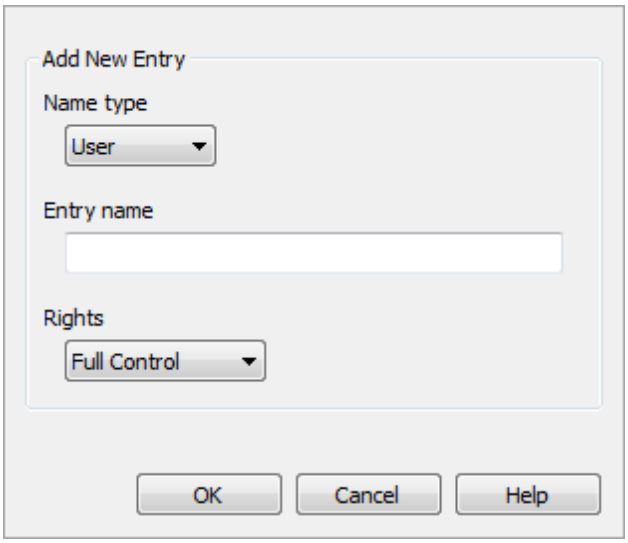

2. From the **Name Type** drop-down list, select a type of right. Rights are granted to the entity selected. The type of right can be **User**, **Group**, **Domain**, or **Everyone**.

3. In the **Entry Name** box, type a name for the new entry. This name appears in the **Name** column. The name entered must be valid for the computer where the Vault is running.

4. From the Rights drop-down list, select the actual rights granted to the given user, group, domain, or everyone. The following are the selections:

   Full Control - Allows the user, group, domain, or everyone to have full control over a selected Vault.

   Store/Retrieve - Allows the user, group, domain, or everyone to store and retrieve data from the Vault.

   Retrieve - Allows user, group, domain, or everyone to retrieve (but not store) data from the Vault.

   None - Blocks the user, group, domain, or everyone from doing anything with the Vault.

5. Click **OK**.

6. Use the up and down arrows to move the new entry up or down in the list to change the priority the new entry is given in relation to other users, groups, and domains.

   Phoenix DEM reads rights from top to bottom, checking for access in the following order: User, Group, Domain, World. If a match is found at the User level, the other types (Group, Domain, World) are not checked; if a match is not found at the User level, the Group entries will be checked, starting with the topmost Group entry in the list. The same pattern holds true for the remaining types. Note that Vault rights and media rights are hierarchical, with media rights being subordinate to overall Vault permissions.

7. Repeat the steps above to add even more entries, or click **OK** to save them.

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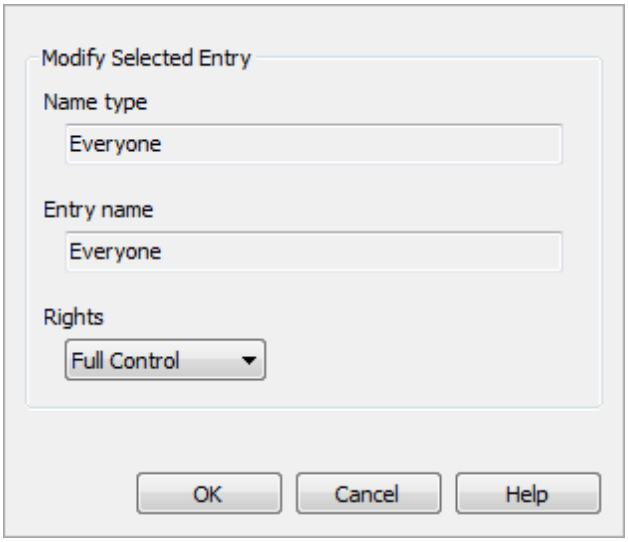
Change Entry

Use the Change Entry dialog box to modify rights for an entry.

1. Double-click the entry to change, and the Change Entry dialog box appears. The **Name Type** and **Entry Name** boxes are not editable.



2. From the **Rights** drop-down list, select the actual rights granted to the given user, group, domain, or everyone. The following are the selections:

   Full Control - Allows the user, group, domain, or everyone to have full control over a selected Vault.

   Store/Retrieve - Allows the user, group, domain, or everyone to store and retrieve data from the Vault.

   Retrieve - Allows user, group, domain, or everyone to retrieve (but not store) data from the Vault.

   None - Blocks the user, group, domain, or everyone from doing anything with the Vault.

3. Click **OK** to save changes.

4. From the main window, click **OK** to save changes.

Delete Entry

1. To remove an entry from a list, select it.

2. Click the **Delete** button, and the entry deletes.

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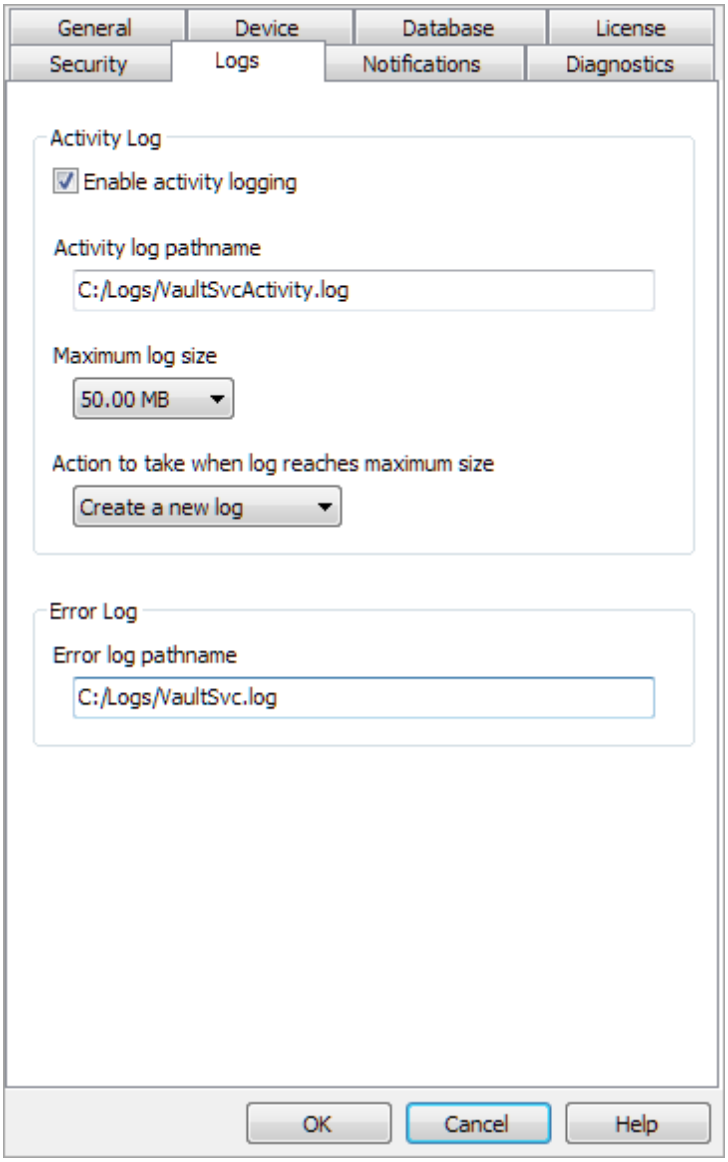
3. Click **OK** to save changes.

Vault Properties Logs Tab

Use the **Logs** tab to set parameters and log activity for the selected Vault.

Access this from Vault Properties by clicking the **Logs** tab.



1. Select preferred Vault values.
2. Click **OK** to save new settings.

Logs Tab Elements

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Element	Description
Enable activity logging	Select to enable activity logging and the activity log boxes for this Vault Properties tab. If not selected, no activity logs are created. Phoenix DEM provides a security audit trail through activity logs. Activity logs include the following events: Vault start, Vault stop, file read, file write, file create, file delete, media load, media unload, and media erase. For these events the name and IP address of the user who executed the event and the date and time the event was executed is recorded. Activity logs can be imported into any application that supports a tab-delimited format, such as Microsoft Excel.
Activity log pathname	Define where the activity logs are written to.
Maximum log size	Define the maximum size the activity log can become. Limit the size of the activity log to find needed information quickly; in large logs this becomes more difficult. Range: 25 MB - 1 GB
Action to take when log reaches maximum size	Either select **Overwrite existing log** or **Create a new log**. Overwriting the activity log prevents activity log build-up.
Error log pathname	Define where error logs are stored. Where activity logs record all activity, error logs record only events that have gone wrong. Error logs are created only when a Vault encounters a problem. Error logs include warnings, and Vault start and stop information. Phoenix DEM supports error logging for every Vault in the Information Repository, and error logging is always enabled.

Vault Properties Notifications Tab

Use the **Notifications** tab to set how Phoenix DEM event notifications are published by enabling and defining e-mail. Events include anything of interest for managing a Vault, including Vault start, Vault stop, media requests, etc.

Access this from Vault Properties by clicking the **Notifications** tab.

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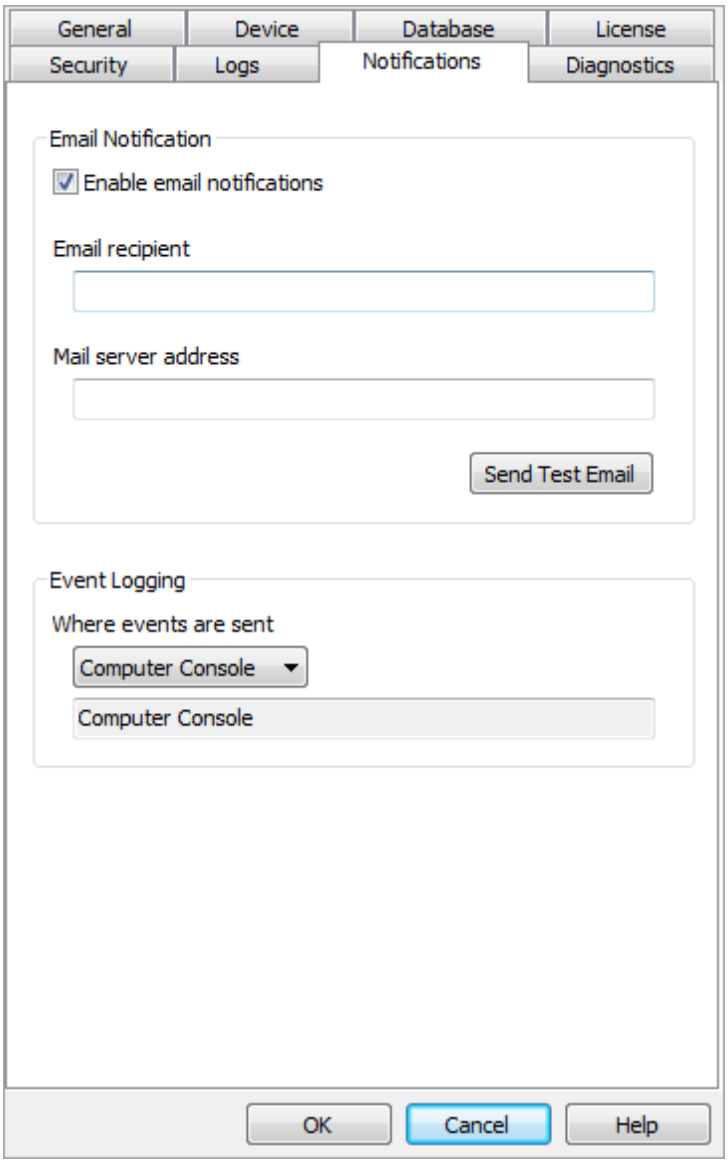

1. Select preferred Vault values.
2. Click **OK** to save new settings.

Notifications Tab Elements

Element	Description
Enable e-mail notification	Enable optional e-mail notifications and boxes from this Vault Properties tab.

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Element	Description
	When enabled, receive an e-mail when an event occurs for managing a Vault. These events include Vault start, Vault stop, media requests, etc., and are the same as those recorded for notifications.
E-mail recipient	Type the e-mail address of the user receiving e-mail notifications about Phoenix DEM events.
Mail server address	The address of your mail server. Use either IP address or computer name. • Click the **Send Test E-mail** button to test the path. If an invalid IP address or computer name is typed, e-mail notifications do not work.
Where events are sent	Define where events are logged. **Computer Console** causes events to be logged in a console that appears on the computer monitor. It remains open as long as the Vault is running. If the Vault is stopped, the console disappears. If the Vault is restarted, the console disappears and then reappears. **Window** causes events to be logged in a window that appears on the computer monitor. This window remains open as long as the Vault is running. If the Vault is stopped, the window disappears. If the Vault is restarted, the window disappears and then reappears. **File** causes events to be logged to a file. Type the path where you want events logged. If a window or console is open when changing the mode of output to **File**, the console or window closes, but the Vault continues to run. To configure the Vault Service to open a window for diagnostic messages see Windows Diagnostics.

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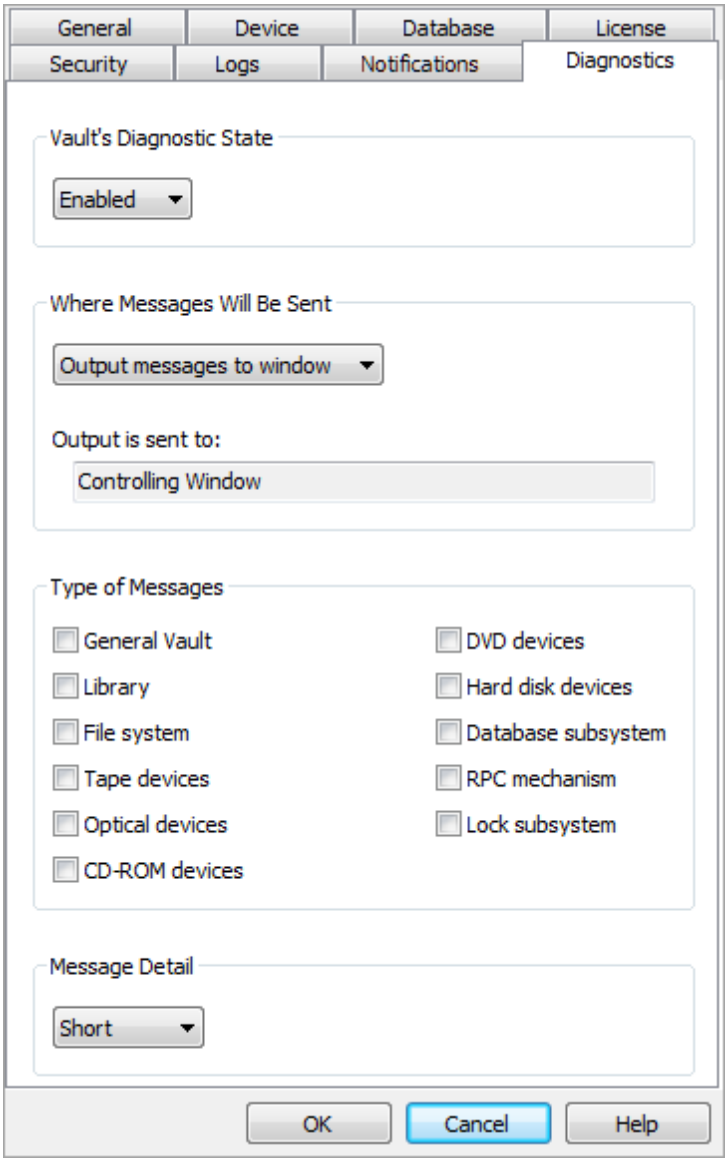
Vault Properties Diagnostics Tab

Use the **Diagnostics** tab to run diagnostic logs for the selected Vault. When enabled, diagnostic logs are created for all Vault activity. Diagnostic logging is optional, and since it significantly impacts system performance, it is disabled by default. Diagnostic logs output to a window or console by default, and if you restart the Vault and return to this tab, diagnostic logs are set to the default of **Disabled**.

If you use diagnostic logging to assist in the resolution of problem conditions, be aware that it seriously impacts Information Repository performance. This is a complex feature and should be used with discretion.

Access this from Vault Properties by clicking the **Diagnostics** tab.



1. From the **Vault's Diagnostic State** drop-down list, select **Enable**.

2. Select preferred options.

3. Click **OK** to save new settings.

Diagnostics Tab Elements

Element	Description
Where Messages will be sent	Select from the following options: **Output messages to window** - Sends the output information to a controlling window that is opened by the process. With this option, a window appears to display Vault activity. If you close this window, you stop the Vault, and Phoenix DEM does not operate without running Vaults. Working in Windows: To configure the Vault Service to open a window for diagnostic messages see Windows Diagnostics. **Output messages to file** - Type the path (including the file name) where you want message files written. This option creates a file that contains all the output data.
Output is sent to	Define where **Output is sent to**. The file path (including the file name) typed here defines where message files are written to. This option creates a file that contains all of the output data.
Type of Messages	Select the types of devices to capture diagnostic information from. Select the checkbox in front of each option; you can make multiple selections. The following are message results for each device: **General Vault** - Information about client connections and data moving in and out of the Vault. **Library** - SCSI activity regarding moving media within a robotic data tape storage device. **File System** - Host computer's working environment. **Tape Devices** - Information about the storage device itself. **Optical Devices** - Information about the storage device itself.

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Element	Description
	CD-ROM Devices - Information about the storage device itself. **DVD Devices** - Information about the storage device itself. **Hard Disk Devices** - Information about the storage device itself. **Database Subsystem** - For use only by Phoenix DEM engineers. **RPC Mechanism** - For use only by Phoenix DEM engineers. **Lock Subsystem** - For use only by Phoenix DEM engineers.
Message Detail	Select the level of detail of diagnostic logs. **Short** - Provides only high-level overview information about the issues being tracked. For example, the General Vault feature only contains client connection names. **Standard** - Provides some detail about the issue being tracked. For example, the General Vault feature provides additional information about the client connection times, and connection types. The Standard option is recommended. **Extended** - Provides a full set of details. It is usually reserved to assist in resolving complex issues in low-level Information Repository functions.

Vault Checkup

Use the Vault Checkup dialog box to view the health of a Vault. This tool is great to use if you suspect something may be wrong with a Vault in your Information Repository.

To run a Vault checkup, Vault Admin requires at least one piece of media with available space and that it does not belong to a storage pool.

Run a Vault Checkup

1. From the Vault Admin left pane, select a Vault name.
2. From the toolbar, click the **Vault Checkup** button.

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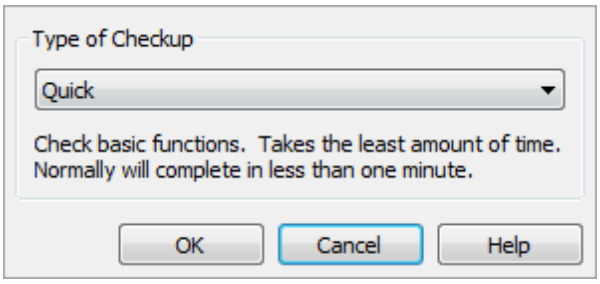

3. From the Vault Checkup dialog box, select from the drop-down list a level of check to run. Each level examines the Vault function, speed, and load bearing capacity to some degree.

   Quick - Check basic functions and takes the least amount of time. Normally completes in less than one minute.

   Normal - Check commonly used functions. Best tradeoff of time and complexity. Normally completes in five minutes.

   Extensive - Exercise the Vault for functionality and speed. Normally completes in ten minutes.

4. Click **OK** to complete the process. Upon completion, a Vault Checkup output window appears containing the results of the checkup.

Prepare Media

Use the Prepare Media window to add and load media to your Information Repository. All the parameters can be set to prepare a unit of media to use with a Vault. Some of these parameters cannot be changed unless you reformat the media (see Prepare Existing Media). Depending on the type of media, the Prepare Media window appears with slight differences.

Before you can prepare media, Vaults should already be added to your Information Repository. Remember that the Vault to add media to must be unsecured before you can prepare any media. To add Vaults, see Add Vaults.

Prepare New or Unknown Media

Follow these steps to prepare **new** or **unknown** media:

Some vaults, such as tape libraries or standalone tape, will show media labeled **Unknown_xx** (with **xx** representing a number). This is referred to as **unknown media**. These are removable media which are not known to the vault you are connected. Media in this state can be unprepared (new) media, media from another vault that is not indexed, or media with an unknown format.

Preparing an Unknown media will erase all existing data.

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to add media to.

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2. To prepare **new media, c**lick on **Media** then click on the **Prepare Media** button in the toolbar. Or right-click on **Media** and choose **Prepare Media** from the shortcut menu. To prepare **unknown** media, click on the expand indicator in front of **Media** to display all media in a tree. Click on the **unknown** media in the tree then click on the **Prepare Media** button in the toolbar. Or right-click on the selected **unknown** media and choose **Prepare Media** from the shortcut menu.

   - You can prepare multiple **Unknown Media** at one time by holding the **Shift** key or **Control** key and clicking on the desired media.

   If multiple **unknown tapes** are selected, **%B** should be included in the name to avoid duplicate naming issues.

   Currently, you can only prepare multiple **tape** media. If you try to prepare multiple media that is not **tape**, you will receive an error message.

3. The options in the Prepare Media window are based on the media type of the Vault selected. In the screenshots below, the first displays disk media options for media being prepared for hard disk. The second image displays tape media options for media being prepared for data tape.

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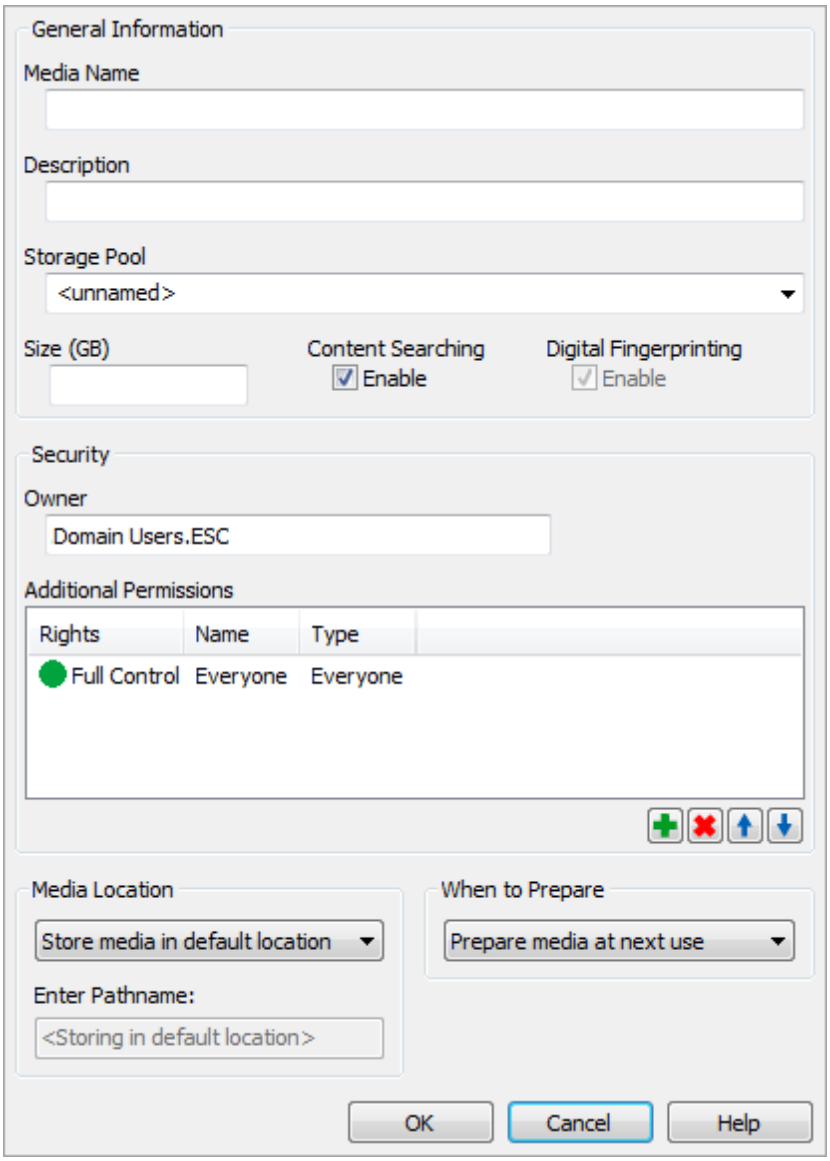
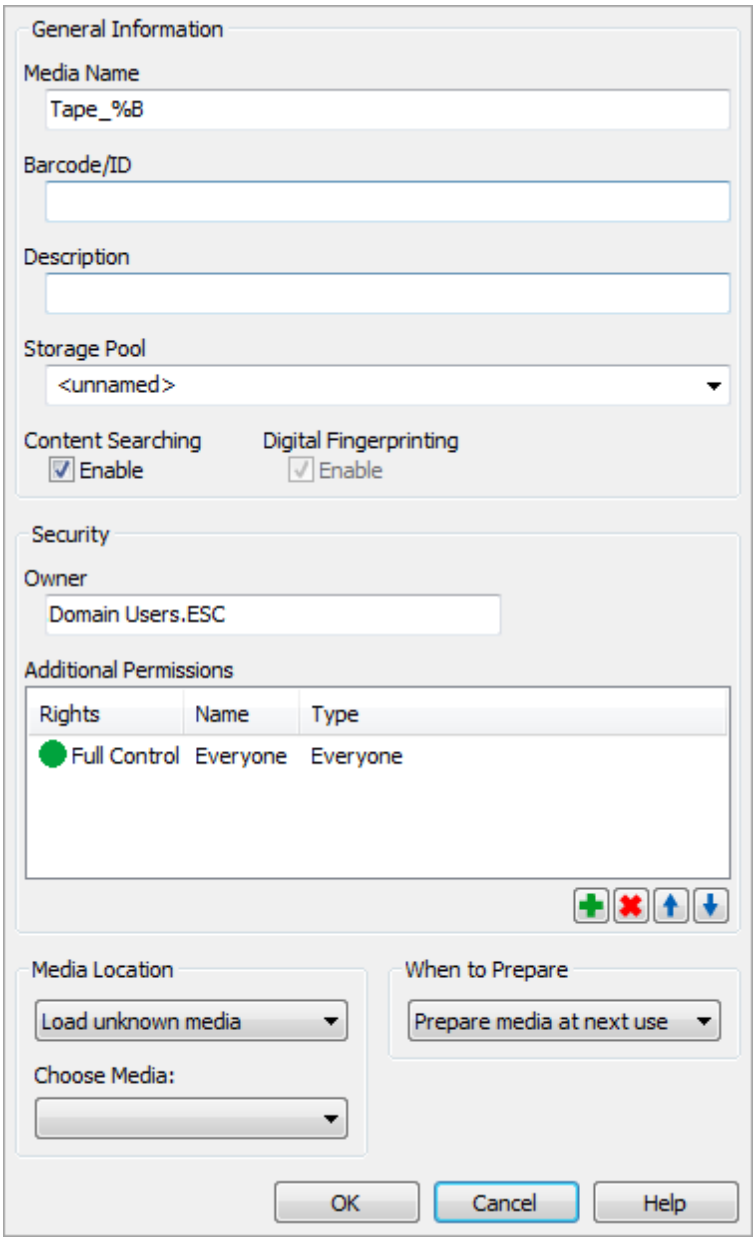

General Information
Media Name
Description
Storage Pool
<unnamed>
Size (GB)
Content Searching
Enable
Digital Fingerprinting
Enable
Security
Owner
Domain Users.ESC
Additional Permissions
Rights
Name
Type
Full Control
Everyone
Everyone
Media Location
Store media in default location
Enter Pathname:
<Storing in default location>
When to Prepare
Prepare media at next use
OK
Cancel
Help

© 2015



4. Enter values into the Prepare Media window fields. Only **Media Name** and **Size** (only **hard disk**) are required. The information entered for **Media Name** and **Storage Pool** appear in the Data Service Policy **Source** tab, and in the **Destination** tabs of Target and Process, Target and Process Policies, and Data Service Policies.

5. In the **Additional Permissions** box, optionally assign rights to a user, group, domain, or everyone. For more information see Vault Properties Security tab, Add Entry.

6. From the **Media Location** drop-down list, assign a place to store new media.

7. From the **When to Prepare** drop-down list, assign a preparation time for the media.

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8. Click **OK** to prepare the media with your selections.

Prepare Existing Media

Preparing existing media is exactly like preparing media, as described in the above (Prepare Media) section, with only a few differences.

- You can use the Prepare Media option to reformat existing media. This will erase all current information stored on that media.
- Preparing existing media reformats media on tape and hard disk.It does not reformat media on shadow hard disk.
- Before reformatting media (or re-preparing media), be sure to first create and run a Data Service policy to migrate or move any data to a safe place if you want to preserve existing information on the media.
- The **Prepare Media** > **Media Location** option is not available when preparing existing media.

Follow these steps to prepare **existing** media:

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to add media to.
2. Click on the expand indicator for **Media** to have a tree of the **Media Names** displayed and also to have a list of the media names displayed in the right pane.
3. Select desired media (individual media or multiple **tape**) then click on the **Prepare Media** button in the toolbar. Or right-click on the selected media and choose **Prepare Media** from the shortcut menu.
   - You can prepare multiple **Media** at one time by holding the **Shift** key or **Control** key and clicking on the desired media.

   Currently, you can only prepare multiple **tape** media. If you try to prepare multiple media that is not **tape**, you will receive an error message.
4. The options in the Prepare Media window are based on the media type of the Vault selected. In the screenshots below, the first displays disk media options for media being prepared for hard disk. The second image displays tape media options for media being prepared for data tape.

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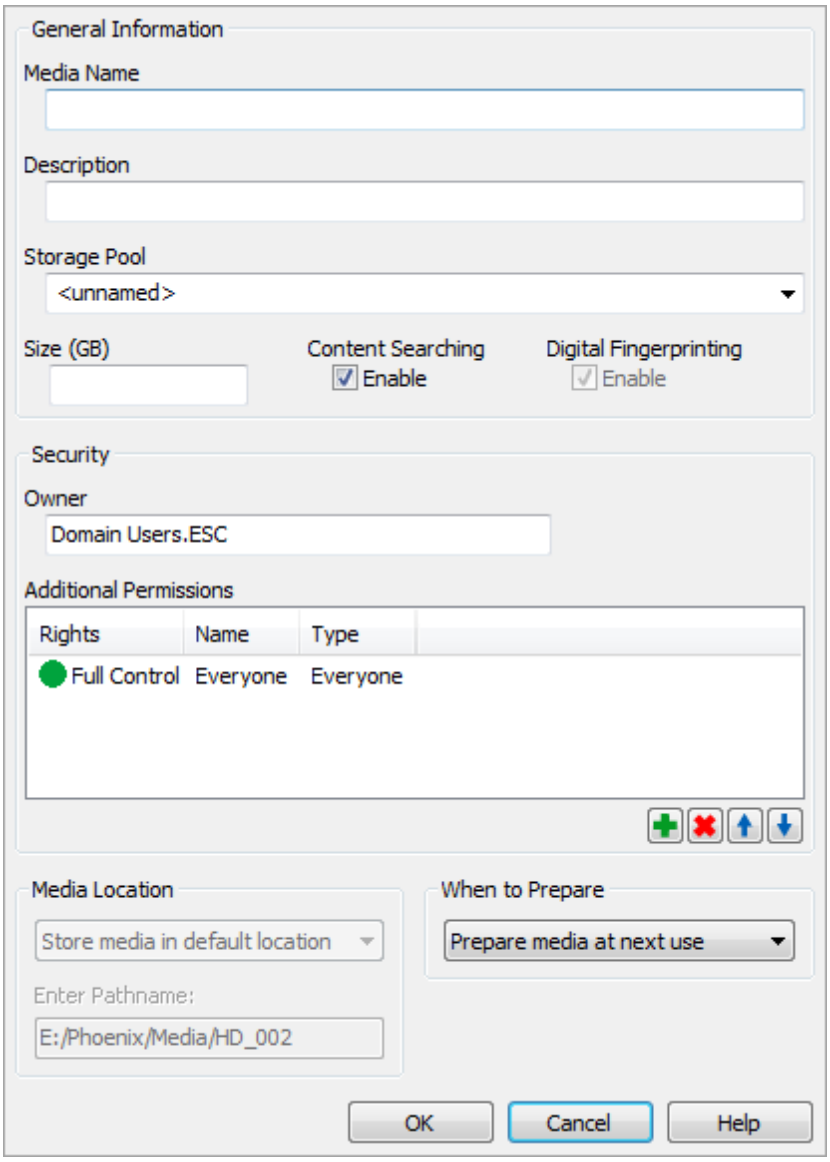
General Information
Media Name
Description
Storage Pool
<unnamed>
Size (GB)
Content Searching
Enable
Digital Fingerprinting
Enable
Security
Owner
Domain Users.ESC
Additional Permissions
Rights
Name
Type
Full Control
Everyone
Everyone
Media Location
Store media in default location
Enter Pathname:
E:/Phoenix/Media/HD_002
When to Prepare
Prepare media at next use
OK
Cancel
Help

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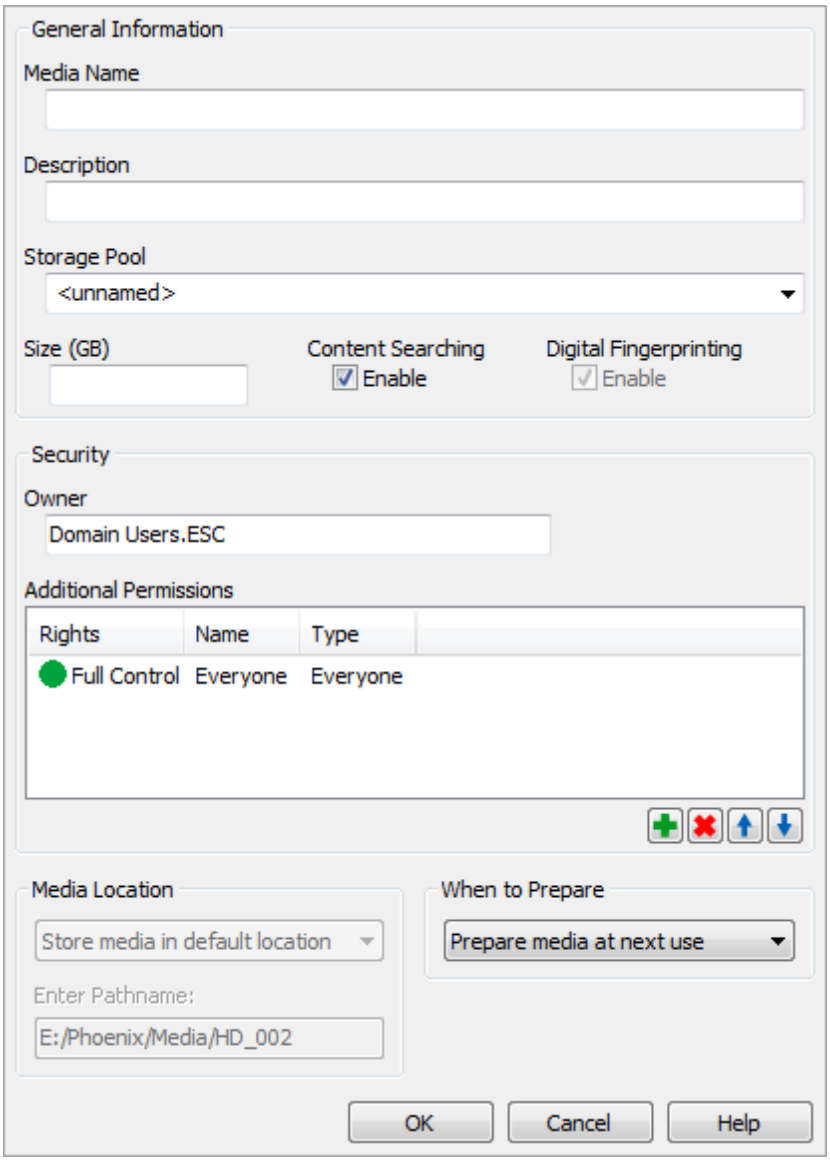

5. Enter values into the Prepare Existing Media window fields. Only **Media Name** and **Size** (only **hard disk**) are required. The information entered for **Media Name** and **Storage Pool** appear in the Data Service Policy **Source** tab, and in the **Destination** tabs of Target and Process, Target and Process Policies, and Data Service Policies.

If multiple **tapes** are selected, **%B** should be included in the name to avoid duplicate naming issues.

6. In the **Additional Permissions** box, optionally assign rights to a user, group, domain, or everyone. For more information see Vault Properties Security tab, Add Entry.

7. The **Media Location** section is not available when preparing existing media.

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8. From the **When to Prepare** drop-down list, assign a preparation time for the media.

9. Click **OK** to save your options.

Prepare Media Elements

Element	Description
Media Name	This is the Information Repository reference name for the media. The name displays on all media referencing interfaces and reports. It is recommended to use a descriptive name to easily distinguish the unit of media. The default name when preparing **new or unknown tape media** is **Tape_%B**. This default name can be changed. When **%B** is included in the media name of a **tape**, the **%B** will be replaced by the tape's barcode. When preparing **multiple tapes**, **%B** must be used in the media name to avoid duplicate naming issues.
Barcode/ID (Available for tape media that support barcodes)	This number corresponds to the barcode or a unique ID for the media. If used, Phoenix DEM tracks the media by its barcode. Barcode systems provide a significant performance increase whenever media is being loaded, unloaded, or indexed by the Information Repository.
Description	Used on all media-referencing interfaces and reports. For easy identification, it is recommended to incorporate the naming convention used for the Media Name in the description.
Storage Pool	Storage pools are used to group disparate units of media. They are advantageous for performing multiple jobs at once and for preventing incomplete processing.

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Element	Description
	An example storage pool uses several units of media (which can be in different Vaults) together for use by a single policy. If you needed to have a "Monday night backup" write to several units of media, you would create a "Monday night backup" storage pool and assign to it every piece of media for that purpose. To assign media to a storage pool, select a storage pool from the **Storage Pool** drop-down list or type the name of the storage pool.
Size (GB) (Available for hard disk media)	Define the amount of storage space to make available for the Information Repository on the given unit of media. You can limit how much physical space on a single hard disk the Information Repository uses. For example, if the media has a physical capacity of 100 GB, you can limit the amount available to the Information Repository to 50 GB by typing 50. Values greater than the amount of space available are not accepted.
Content Searching	Search the content of files in the Information Repository. Enable this feature to run content specific searches. Enabling this feature increases the size of your Vault's database. If not selected, you cannot search for content in your Information Repository. When preparing shadow hard disk media, content searching can be time consuming. If enabled, you will not be able to search for and retrieve data until after processing has finished. Until then, Search & Retrieve returns 0 results found.
Digital Fingerprinting	This option supports chain of custody management. When enabled, a digital fingerprint is assigned to all data captured or ingested into the Information Repository. This option is always selected and cannot be changed for hard disk and tape Vaults. While data in shadow hard disk Vaults is part of the Information Repository, it does not go through the ingestion process and is not automatically digitally fingerprinted. Digital fingerprinting of a shadow hard disk Vault can be time consuming, so you can elect to disable this option when preparing media. Since it is optimal to have all of the data in your Information Repository digitally fingerprinted, you can enable digital fingerprinting for shadow Vaults whenever convenient.

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Element	Description
	Digital fingerprinting can be time consuming. If enabled when you prepare shadow hard disk media, you will not be able to search for and retrieve data until after Phoenix DEM has finished processing; until processing is finished, Search & Retrieve will return "0 results found."
Owner	A read-only box, naming the owner of the media. The media owner value is from the Vault's host computer and the login used.
Additional Permissions	Permissions, or rights, are the limitations set for users and determine how users are permitted to manipulate files. Each piece of media can have up to sixteen different permission levels. The permissions information entered creates an access control list for the media. For new media, all users on the network are granted rights to use media by default. To restrict access to media for specific users or groups, the default rights must be deleted, and then the new, limited rights need to be added. When preparing shadow hard disk media, be sure to use appropriate permissions so file systems are not vulnerable. If security settings are not set appropriately, everyone on your network may have access to the shadowed hard disk. To add new permissions, change existing permissions, or delete existing permissions, and for more information see Vault Properties Security tab.
Media Location	Options differ depending on if you are preparing a hard disk or tape media. **Hard Disk** • Leave the default location, **Store media at default location**. (This location is set when the Vault is first added, and can be changed using the Vault Properties **Device** tab for the Vault.) Or, 1. Select **Store media at pathname** to store media at a location other than the default.

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Element	Description
	2. In **Enter Pathname**, type a path including the drive letter of the location to store media related files and directories. For example, C:/Archive/SaturdayBackups. When typing a path, the parent folder must already exist and no other media can be loaded at that same path. This path is relative to the computer where the Vault Service is running. The Vault Service must have rights to add files and folders at the specified location. **Tape** • Select **Load unknown media** and then from the **Choose Media** drop-down list, select the media. Or, • Select **Load from storage slot**, and then from the drop-down list, select a storage slot. Or • Select **Load from mail slot**, and then from the drop-down list, select a mail slot. **Shadow Hard Disk** • In **Enter Pathname**, type a path including the drive letter of the file tree to shadow. The **Media Location** drop-down list is not active for shadow hard disk media.
When to Prepare	Select a preparation time for the media. **Prepare media at next use** - Media is prepared when a job is started that requires the selected media. **Prepare media now** - Specified media is loaded into a drive and formatted immediately, regardless of when a job starts.

Media On The Fly

Increase automatic fail-over performance with the flexible Information Repository design to eliminate a single point of failure. If there is more than one Vault available, clients can divide use of the available Vaults. They can fail-over to other Vaults should a Vault fail. The same logic applies if there is more than a single tape-based Vault containing tapes with the same label.

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For example, you can move media freely between Vaults of the same type. If a tape is taken out of one Vault and inserted into another, the Information Repository automatically locates the data. If a tape library is full, a second library can be brought online seamlessly. The result is a balanced Information Repository with two libraries that are accessible to the network.

Load Media

Manage your media by loading media, reloading media, or re-indexing media. Use each in the following ways:

Load Media

- To add previously created media to a Vault.
- To re-load media that has been ejected at some point in time and is not tracked.

If you attempt to load unprepared media to a Vault, the operation will fail.

Reload Media

- To add offline, but tracked media back to the Information Repository.

When reloading media, the Vault uses its database for the media unless it finds corruption (or re-indexing is forced). Use to reload media to the Vault. See Reload Media.

You can also use Reload Media to re-index a shadow hard disk Vault when data on the shadow hard disk Vault has changed but the change is not yet reflected in the Information Repository.

Re-index Media

- Rescan data on the media.

If media becomes unreliable then re-index it. To re-index media, first unload the media and then reload the media; otherwise the operation fails and an error message appears.

Loading Media Types

The following subsections instruct you on how to load a hard disk media, a data tape media, and a shadow hard disk media.

Load Hard Disk Media

Load media to existing Vaults only. If you have not yet added any Vaults, do so now by using the Add or Remove Vault Wizard.

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to load media to.
2. Click on the expand indicator for **Media** to have a tree of the media names displayed and also to have a list of the media names displayed in the right pane.

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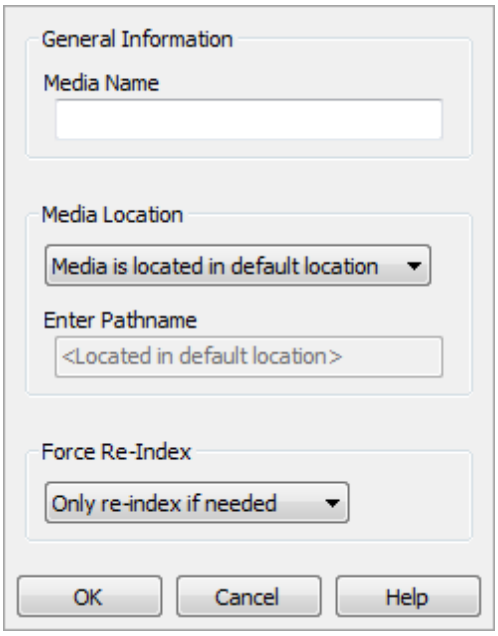
3. Select desired media (individual or multiple) then click on the **Load Media** button in the toolbar. Or right-click on the selected media and choose **Load Media** from the shortcut menu. The **Load Media** window opens.

You can load multiple hard disk media by holding the **Shift** key or **Control** key and clicking on the desired hard disk media in the right pane.



4. In the **Media Name** text box, type the name for the media being loaded.

5. From the **Media Location** drop-down list, select **Media is located in default location** or **Media is located at pathname**. Know that Phoenix DEM always looks for the media at the default location.

6. If you select **Media is located at pathname**, type the directory path for the media being loaded in the **Enter Pathname** text box.

7. From the **Force Re-Index** drop-down list, use the default setting **Only re-index if needed**. Phoenix DEM indexes the media if necessary, but you can force re-indexing to ensure that your media is re-indexed by selecting **Force a re-Index of media**.

8. Click **OK** to complete the process, and new media appears in the media list.

Load Tape Media

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Load media to existing Vaults only. If you have not added Vaults yet, do so now using the Add or Remove Vault Wizard.

1. Ensure that there is a new media in the storage device. How to do this varies depending on the hardware being used. Refer to the hardware documentation for assistance.

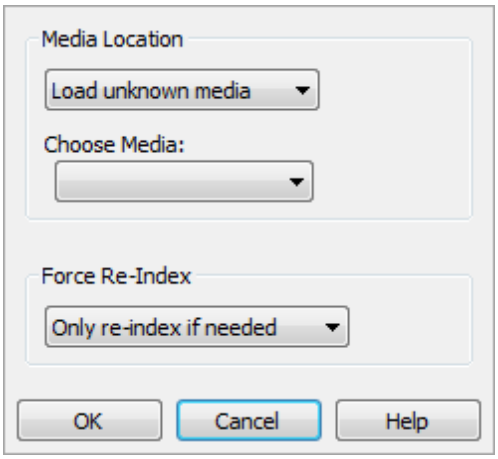
2. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to load media to.

3. Click on the expand indicator for **Media** to have a tree of the media names displayed and also to have a list of the media names displayed in the right pane.

4. Select desired media (individual or multiple) then click on the **Load Media** button in the toolbar. Or right-click on the selected media and choose **Load Media** from the shortcut menu. The **Load Media** window opens.

You can load multiple tape media by holding the **Shift** key or **Control** key and clicking on the desired tape media in the right pane.

5. From the toolbar, click the **Load Media** button. Or right click on **Media** and choose **Load Media** from the shortcut menu. Or right click on the selected **Media Name** (or the multiple selected names) and choose **Load Media** from the shortcut menu.



5. From the **Media Location** drop-down list, select **Load unknown media** to load a media that is already physically loaded into the Vault's storage device. Select **Load from storage slot** to load a media from a known storage slot within the Vault's storage library.

6. From the **Choose media** drop-down list, select media. It displays all of the media in the storage device.

7. From the **Force Re-Index** drop-down list, use the default setting **Only re-index if needed**. Phoenix DEM indexes the media if necessary, but you can force re-indexing to ensure that your media is re-indexed by selecting **Force a re-Index of media**.

8. Click **OK** to complete the process, and new media appears in the media list.

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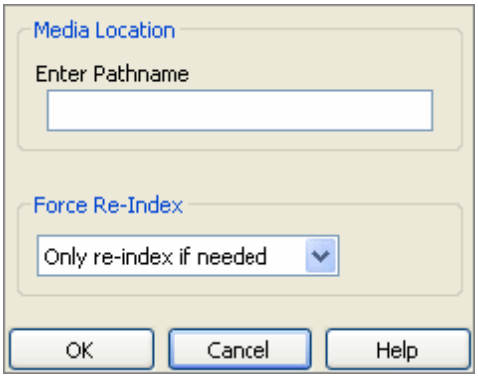
Load Shadow Hard Disk Media

Load media to existing shadow hard disk Vaults only. If you have not added Vaults yet, do so now using the Add or Remove Vault Wizard.

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to load media to.
2. Select the "Media" name.
3. From the toolbar, click the **Load Media** button.



4. In the **Enter Pathname** text box, type the pathname of the directory to shadow.
5. From the **Force Re-Index** drop-down list, use the default setting **Only re-index if needed**. Phoenix DEM indexes the media if necessary, but you can force re-indexing to ensure that your media is re-indexed by selecting **Force a re-Index of media**.
6. Click **OK** to complete the process, and new media appears in the media list.

Reload Media

As long as you are tracking media, your Vault displays media, even if the media has been unloaded from the storage device. Reloading media means to add it to the storage device after it has been taken offline. If you are using tapes or glass media, insert the media into its storage device. If you are using virtual media, then you do not physically handle the media.

Use the **Reload Selected Media** window to load tape media (such as tapes that are outside of a storage device) into a Vault or to re-index hard disk media. Use it also, when the contents of your shadow hard disk Vault have changed and, therefore, need to be re-indexed. The Reload Selected Media window is almost identical to the Load Media window.

Reload Media

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to reload media to.

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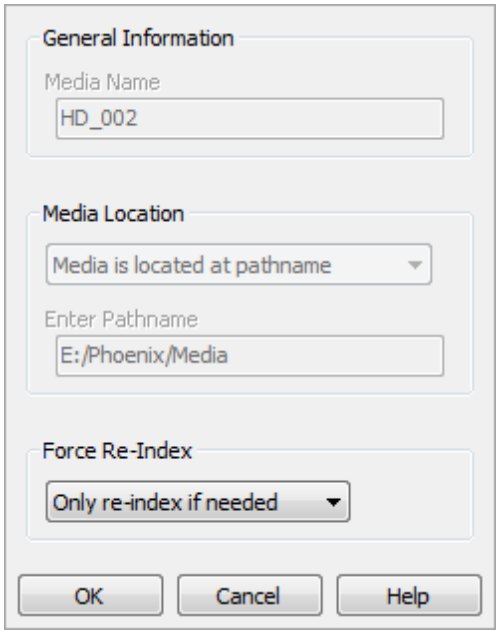
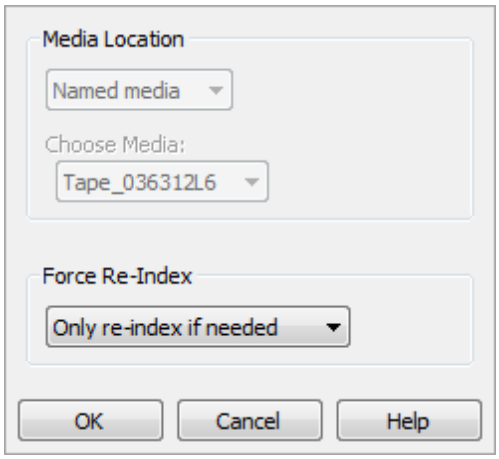
2. Click on the expand indicator for **Media** to have a tree of the media names displayed and also to have a list of the media names displayed in the right pane.

3. Select desired media (individual or multiple) then click on the **Load Media** button in the toolbar. Or right-click on the selected media and choose **Reload Media** from the shortcut menu. The **Reload Media** window appears; it looks just like the Load Media window except for the header and the available fields to modify values.

You can reload multiple media by holding the **Shift** key or **Control** key and clicking on the desired media in the right pane.





4. Select a re-indexing option. If the Vault has a good listing of the media in its catalog, select **Only re-index if needed**. The media unit will not be re-indexed if Phoenix DEM determines that re-indexing is not called for. On the other hand, if the catalog entries for the media are suspect or do not exist, the Information Repository will attempt to re-index the media to update its catalog. Select **Force a re-index of media** only if you have a reason to suspect that the catalog on the Vault or the media is incorrect.

5. Click Ok. The media will be reloaded and no longer have a gold bar beneath it.

Unload Media

The Vault Admin cannot manipulate files (only Data Services can), but the Vault Admin keeps lists of files and media in each Vault, and knows whether or not the media is online, near-line, or offline. By using Unload Media you dictate if files and media are tracked or not tracked when unloading media. In most cases, media is removed when it is full.

Removing media from a Vault can be done in two ways:

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- **Tracked and managed by the Information Repository -** This is known as unloading to offline status. As long as media is tracked, video or data files remain in the Vault. Although offline, files and metadata are searchable.
- **Not tracked by the Information Repository** - Files are removed from the Vault and are not searchable. If you do not track, you can always reload files and media at a later time.

The process of unloading media is identical for hard disk media and data tape media - with one exception. On data tape media you can either leave the media inside the storage library or remove it from the Information Repository entirely. Standalone data tape drive-based Vaults work the same as data tape library-based Vaults.

Unloading Media Types

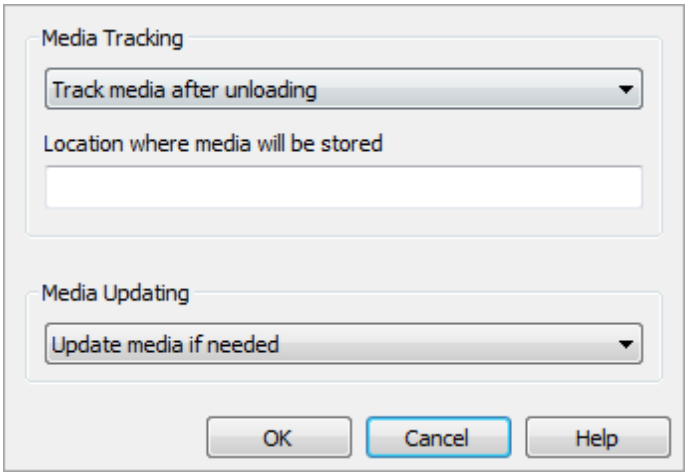
The following subsections instruct you on how to unload a hard disk media and a data tape media.

Unload Hard Disk Media

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to remove media from.
2. Click on the expand indicator for **Media** to have a tree of the media names displayed and also to have a list of the media names displayed in the right pane.
3. Select desired media (individual or multiple) then click on the **Unload Media** button in the toolbar. Or right-click on the selected media and choose **Unload Media** from the shortcut menu. The **Unload Media** window opens.

You can unload multiple hard disk media by holding the **Shift** key or **Control** key and clicking on the desired hard disk media in the right pane.

4. From the toolbar, click the **Unload Media** button. Or right click on the selected **Media Name** (or the multiple selected names) and choose **Unload Media** from the shortcut menu.



5. From the **Media Tracking** drop-down list, select an option:

   Track media after unloading - The Vault's memory updates with this information. Should data on this unit of media be required for retrieval, a media request alert (including the **Location where media will be stored**) is displayed by the Information Repository, prompting an administrator to load the required media.

   Do not track media any longer - The **Location where media will be stored** text box is disabled. When the media leaves the Information Repository, its entries are removed from the Vault's memory.

6. If you select **Track media after unloading**, type a descriptive note about where media is to be stored in the **Location where media will be stored** text box.

7. From the **Media Updating** drop-down list, select an option:

   Update media if needed - The Vault updates the media memory - on the media being unloaded -if it is out of date.

   Do not update media - The Vault does not update the media memory for the media being unloaded.

8. Click **OK** to complete the process. The media appears with a gold background in the Vault Admin main window.

Hard disk media is brought back online automatically when available and after 10 minutes has elapsed since it was taken offline. The 10 minutes is to give a user time to unload the media and remove it, if that is what was intended. In cases where the media was automatically taken offline due to technical difficulty (i.e., network outage of SAN or RAID failure), it will come back online automatically within 10 minutes after the technical difficulty has been resolved .

Unload Tape Media

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to remove media from.

2. Click on **Media** to have a tree of the media names displayed and also to have a list of the media names displayed in the right pane.

3. Select desired media (individual or multiple) then click on the **Unload Media** button in the toolbar. Or right-click on the selected media and choose **Unload Media** from the shortcut menu. The **Unload Media** window opens.

You can unload multiple tape media by holding the **Shift** key or **Control** key and clicking on the desired tape media in the right pane.

4. From the toolbar, click the **Unload Media** button. Or right click on the selected **Media Name** (or the multiple selected names) and choose **Unload Media** from the shortcut menu.

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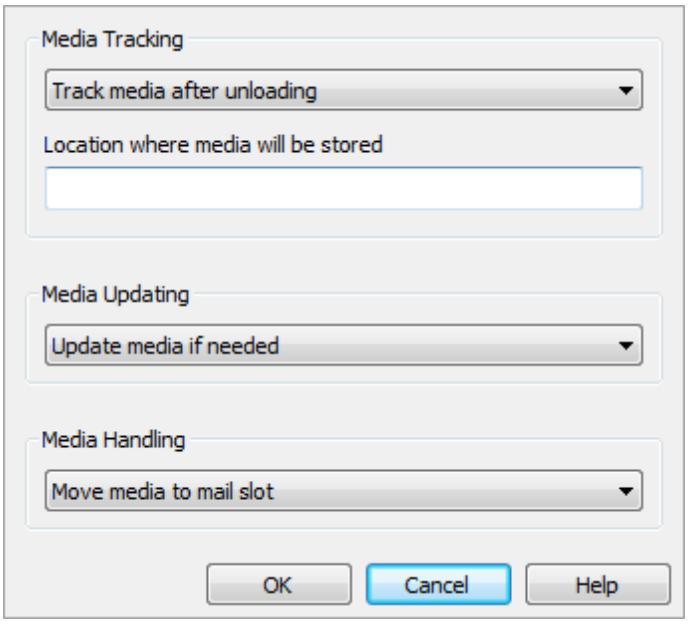

5. From the **Media Tracking** drop-down list, select an option:

   Track media after unloading - The Vault's memory updates with this information. Should data on this unit of media be required for retrieval, a media request alert (including the **Location where media will be stored**) is displayed by the Information Repository, prompting an administrator to load the required media.

   Do not track media any longer - The **Location where media will be stored** text box is disabled. When the media leaves the Information Repository, its entries are removed from the Vault's memory.

6. If you select **Track media after unloading**, type a descriptive note about where media is to be stored in the **Location where media will be stored** text box.

7. From the **Media Updating** drop-down list, select an option:

   Update media if needed - The Vault updates the media memory - on the media being unloaded -if it is out of date.

   Do not update media - The Vault does not update the media memory for the media being unloaded.

8. From the **Media Handling** drop-down list, select an option:

   Leave media in library - The tape will remain in the library after it has been unloaded.

   Move media to mail slot - The tape will be moved to the library's mail slot after it has been unloaded.

   When multiple tapes are selected to be unloaded, only the **Leave media in library** option is available.

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8. Click **OK** to complete the process. The media appears with a gold background in the Vault Admin main window.

Erase Media

The erase media feature erases data from a unit of media but leaves the media header information intact. Header information comprises the information entered when the media was prepared: media name, owner, rights, and other information. It is better to erase media rather than reformat media whenever possible. When media is erased, an "erased" flag is added that can easily be overwritten.

Erase media:

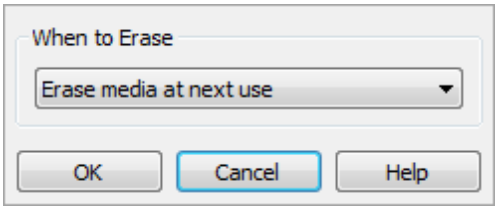
- When physical media with sequential write capabilities (like data tape) is used as the storage media, it must be erased as part of the purge process. If it is part of a multi-level storage hierarchy where files are migrated and replicated, viable data on the media must be moved to other media and the original media erased in order to purge old, expired data.
- When media is used in a cycled Information Repository. At the end of a cycle, the old media being reintroduced needs to be erased by the Information Repository before it can be reused.

Erase Media

1. From the Vault Admin left pane, click the expand indicator (plus sign) in front of the Vault to erase media from.
2. Click on the expand indicator for **Media** to have a tree of the media names displayed and also to have a list of the media names displayed in the right pane.
3. Select desired media (individual or multiple) then click on the **Erase Media** button in the toolbar. Or right-click on the selected media and choose **Erase Media** from the shortcut menu. The **Erase Media** window opens.

You can erase multiple media by holding the **Shift** key or **Control** key and clicking on the desired media in the right pane.

4. From the toolbar, click the **Erase Media** button.Or right click on the selected **Media Name** (or the multiple selected names) and choose **Erase Media** from the shortcut menu.



5. From the **When to Erase** drop-down list, select an option:

   Erase media at next use - The media is erased just prior to the next time it is used in a job.

   Erase media now - The media is loaded into a drive and erased immediately.

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6. Click the **OK** button to activate your selection.

Start Vaults Manually

When managing an Information Repository, there may be times when Vaults do not start automatically, so you need to start them manually. **Vault Service** is used to start a vault manually. See Manage Services for information on manually controlling **Vault Service**.

Vault Details

All the active Vaults within the Information Repository are displayed under Entire Network in the left pane of the Vault Admin window.

- Click the expand indicator (plus sign) in front of a Vault to view the sub-items associated with the Vault and to activate toolbar buttons. Certain icons in the toolbar are only active when a Vault, Media, or Drive is selected.

The following are details to view:

- Information

- Current Clients

- Volumes (displayed only in advanced mode, from the Vault Admin main menu click **View** > **Enable Advanced**)

- Media (depending on media type, displayed information varies)

- Drives (depending on media type, displayed information varies)

Information

From the Vault Admin left pane, selecting **Information** displays the overall details of the Vault in the Vault Admin right pane.

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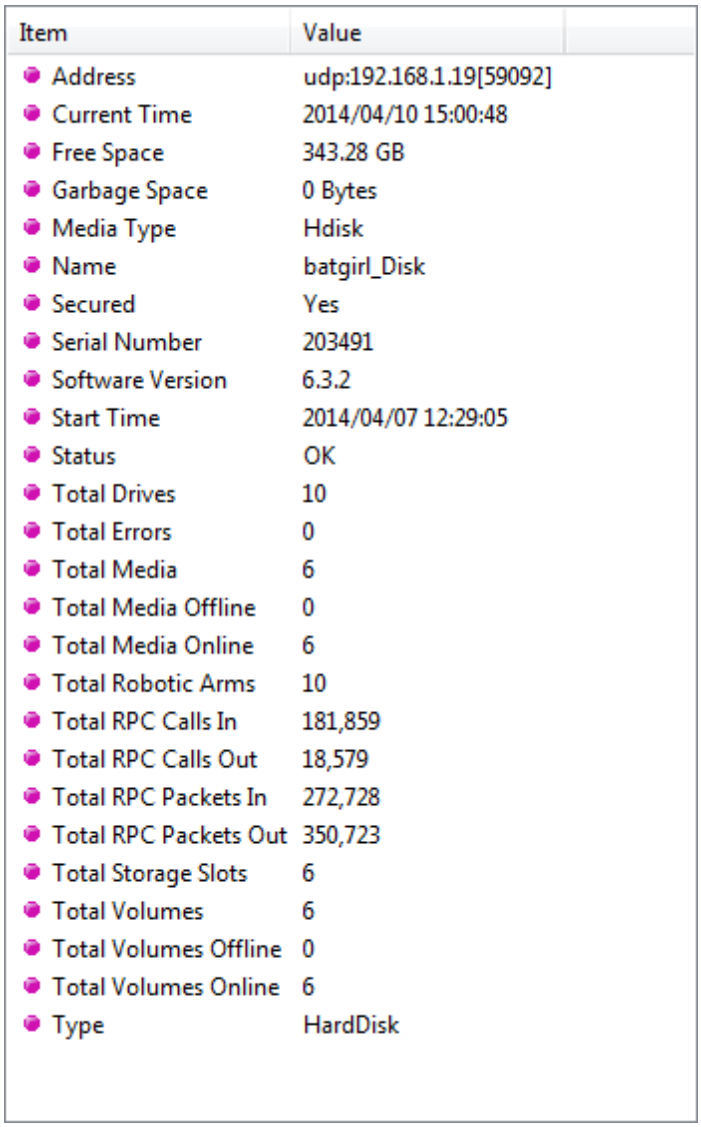

Item	Value
Address	udp:192.168.1.19[59092]
Current Time	2014/04/10 15:00:48
Free Space	343.28 GB
Garbage Space	0 Bytes
Media Type	Hdisk
Name	batgirl_Disk
Secured	Yes
Serial Number	203491
Software Version	6.3.2
Start Time	2014/04/07 12:29:05
Status	OK
Total Drives	10
Total Errors	0
Total Media	6
Total Media Offline	0
Total Media Online	6
Total Robotic Arms	10
Total RPC Calls In	181,859
Total RPC Calls Out	18,579
Total RPC Packets In	272,728
Total RPC Packets Out	350,723
Total Storage Slots	6
Total Volumes	6
Total Volumes Offline	0
Total Volumes Online	6
Type	HardDisk

Element	Description
Address	The network address of the Vault selected and the Vault's port number.
Current Time	The Vault's internal clock time. This is mapped to the Vault's host computer.
Free Space	The amount of free space available in the Vault.
Garbage Space	The amount of purge space in the Vault (typically zero on hard disk based Vaults).

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Element	Description
Media Type	Additional information about the storage device technology used by the Vault. (Hard disk based Vaults always have a Media Type of Hdisk while data tape based Vaults list the type of technology used, such as DLT or LTO.)
Name	The name of the Vault selected.
Secured	Security of Vault; secured or unsecured.
Serial Number	A number created at the time of manufacture mapping to a license.
Software Version	The version of software used by the Vault.
Start Time	The date and time of the Vault's last startup cycle.
Status	The status of the Vault regarding errors or media requests.
Total Drives	The total number of storage media drives within the Vault's storage device. Hard disk Vaults are mapped differently than other Vault storage devices. Vault's mapped at a physical drive may be one-to-one or virtualized making the ratio higher or lower.
Total Errors	A cumulative list of errors since the Vault has been online. This number is reset whenever the Vault is restarted.
Total Media	The amount of media, online and offline, being tracked and managed by the Vault.
Total Media Offline	Includes formatted media outside of the Vault's storage that is tracked by the Information Repository.
Total Media Online	Includes formatted media within the Vault's storage that is tracked by the Information Repository.
Total Robotic Arms	The number of robotic devices within the Vault's storage used to move media from storage slots to drives and back again. Hard disk based Vaults usually have as many robotic arms as drives. Other storage devices, like data tape based devices, usually have only one robotic arm.
Total RPC Calls In	The number of remote procedural calls that have been made to the Vault since its latest startup cycle.

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Element	Description
Total RPC Calls Out	The number of remote procedural calls made by the Vault since its latest startup cycle.
Total RPC Packets In	The number of network packets that have been received by the Vault since its latest startup cycle.
Total RPC Packets Out	The number of network packets that have been sent by the Vault since its latest startup cycle.
Total Storage Slots	Storage slots are areas where media is stored in the Vault's storage when it is not in a media drive. With data tape and other physical media-based storage devices, the total storage slots number is fixed by the storage device. In hard disk Vaults the number is usually mapped to the number of virtual media units set up in the Vault.
Total Volumes	The number of volumes on media being tracked and managed by the Vault. It includes all online and offline media tracked.
Total Volumes Offline	Includes volumes on formatted media outside the Vault's storage tracked by the Information Repository.
Total Volumes Online	Includes volumes on formatted media within the Vault's storage tracked by the Information Repository.
Type	The storage device technology the Vault uses.

Current Clients

From the Vault Admin left pane, selecting **Current Clients** displays details in the Vault Admin right pane about computers on which the Information Repository is currently working. A good way to watch for activity is to monitor Network Activity.

- Click **Current Clients**, and if there is any current working activity, the computers are listed in the Vault Admin right pane. You can opt to change the format of computer details listed from the **Options** menu > **Address Format**.

Media

From the Vault Admin left pane, selecting **Media** displays a list of the media for the selected Vault. Then, select a specific piece of media from the left pane, and the details of that unit of media display in the Vault Admin right pane.

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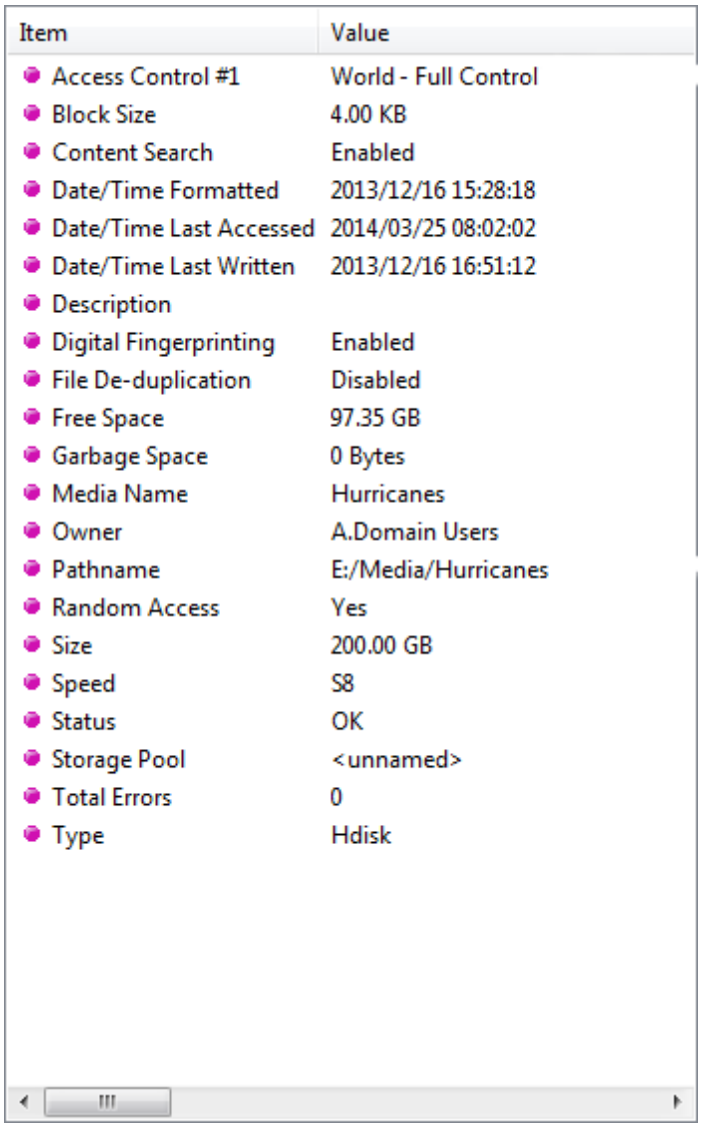

Item	Value
Access Control #1	World - Full Control
Block Size	4.00 KB
Content Search	Enabled
Date/Time Formatted	2013/12/16 15:28:18
Date/Time Last Accessed	2014/03/25 08:02:02
Date/Time Last Written	2013/12/16 16:51:12
Description	
Digital Fingerprinting	Enabled
File De-duplication	Disabled
Free Space	97.35 GB
Garbage Space	0 Bytes
Media Name	Hurricanes
Owner	A.Domain Users
Pathname	E:/Media/Hurricanes
Random Access	Yes
Size	200.00 GB
Speed	S8
Status	OK
Storage Pool	<unnamed>
Total Errors	0
Type	Hdisk

Element	Description
Access Control #1	The first of sixteen controls that can be assigned to the selected media. Each object in a system, like files or directories, has a security attribute identifying it to the access control list (ACL) telling the operating system of access rights each user has to an object.
Barcode/ID (data tape media only)	The barcode number or label assigned to the media selected. (If the storage device has a barcode reader, the data is assigned by the physical barcode label on the media, and any other information is ignored by the Information Repository.)
Block Size	The block size used by the media unit selected.

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Element	Description
Content Search	Indicates if content search is enabled.
Current Location (data tape media only)	The current location of the media.
Date/Time Formatted	The most recent time the media unit was formatted for use.
Date/Time Last Accessed	The last time the media unit was accessed for use by the Information Repository.
Date/Time Last Written	The last time data was written to the selected media.
Description	The description from the Prepare Media dialog box.
Digital Fingerprinting	Indicates if digital fingerprinting is enabled.
File De-duplication	Indicates if de-duplication is enabled.
Free Space	The available amount of space on the media for use.
Garbage Space	The amount of used media space that is eligible to be purged from the Information Repository.
Home Location (data tape media only)	The assigned media slot in a drive.
Media Name	The name of the media selected. The name is part of the media label.
Owner	Displays the user logged into the Information Repository during media format.
Pathname (hard disk and shadow hard disk media only)	The directory path of where the media's space actually resides.
Random Access	Indicates if random access of the media is permitted.
Size	The capacity of the media unit selected.
Speed	A performance rating where different types of media are rated by access and read/write performance. Hard disk is considered the highest performance media and DDS-2 data tape is a lower performing media.
Status	The overall health and usability of the media.
Storage Pool	The name of the storage pool, if the media belongs to one.

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Element	Description
Total Errors	The number of errors the selected media has generated.
Total Volume: (advanced mode only)	The number of volume the media holds.
Total Loads (data tape media only)	The number of times the selected media has been loaded into a drive.
Type	The storage device used by the media (hard disk, data tape, etc.)
Volume # (advanced mode only)	Lists each volume associated with the media.

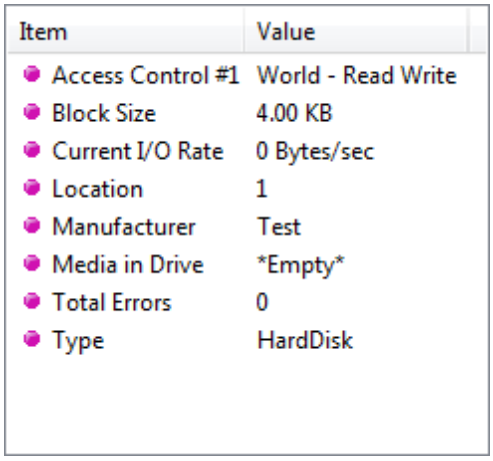
Volumes

From the Vault Admin left pane, selecting **Volumes** displays volume information on the media if the media has more than one volume associated with it for the selected Vault. A data tape might store data on both sides of the tape, presenting two volumes of media storage. Select a specific volume from the left pane, and the details about that volume display in the Vault Admin right pane.

Only displays if in advanced mode. From the Vault Admin main menu click **View** > **Enable Advanced**.

Drives

From the Vault Admin left pane, selecting **Drives** displays a list of drives in the Vault. Then, select a specific drive from the left pane, and the details about that drive display in the Vault Admin right pane.



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Element	Description
Access Control #1	The first of sixteen controls that can be assigned to the selected media.
Block Size	The block size employed by the media when it is accepting data.
Current I/O Rate	The rate at which data is being written to media.
Last Cleaning (data tape media only)	The last time the media has been physically cleaned.
Location	The slot number in the drive that the media occupies.
Manufacturer	The name of the company that manufactured the drive.
Media in Drive	The media's assigned name.
Total Errors	The number of errors a unit of media unit has generated.
Total Loads (data tape media only)	The total number of times a unit of media has been physically loaded into the drive.
Type	The type of drive.

Network Activity

Network Activity graphically represents, in real-time, each client and Vault on the network. It works together with the Vault Stats and Mini Vault Stats windows to monitor all data, media, and Vault operations within the Information Repository.

Remember that a Vault is a storage device used to store files. The Vault drives the storage device and provides memory resources for program execution, metadata management, and continuous monitoring.

From your suite of product applications, open the Network Activity application (NetActivity.exe). From Network Activity access Mini Vault Stats to see high level Vault activity information. Or access Vault Stats to view detailed vault activity information.

Every client and Vault in the Information Repository is represented by a sphere and a label in the Network Activity window. Clients appear when jobs are running and the activity is denoted by dynamic lines connecting clients and Vaults. As a job is running, move the mouse pointer over the client symbol to view Job, User, and Status details. If you need to freeze the current display of Network Activity, right-click and hold the application's **Title** bar.

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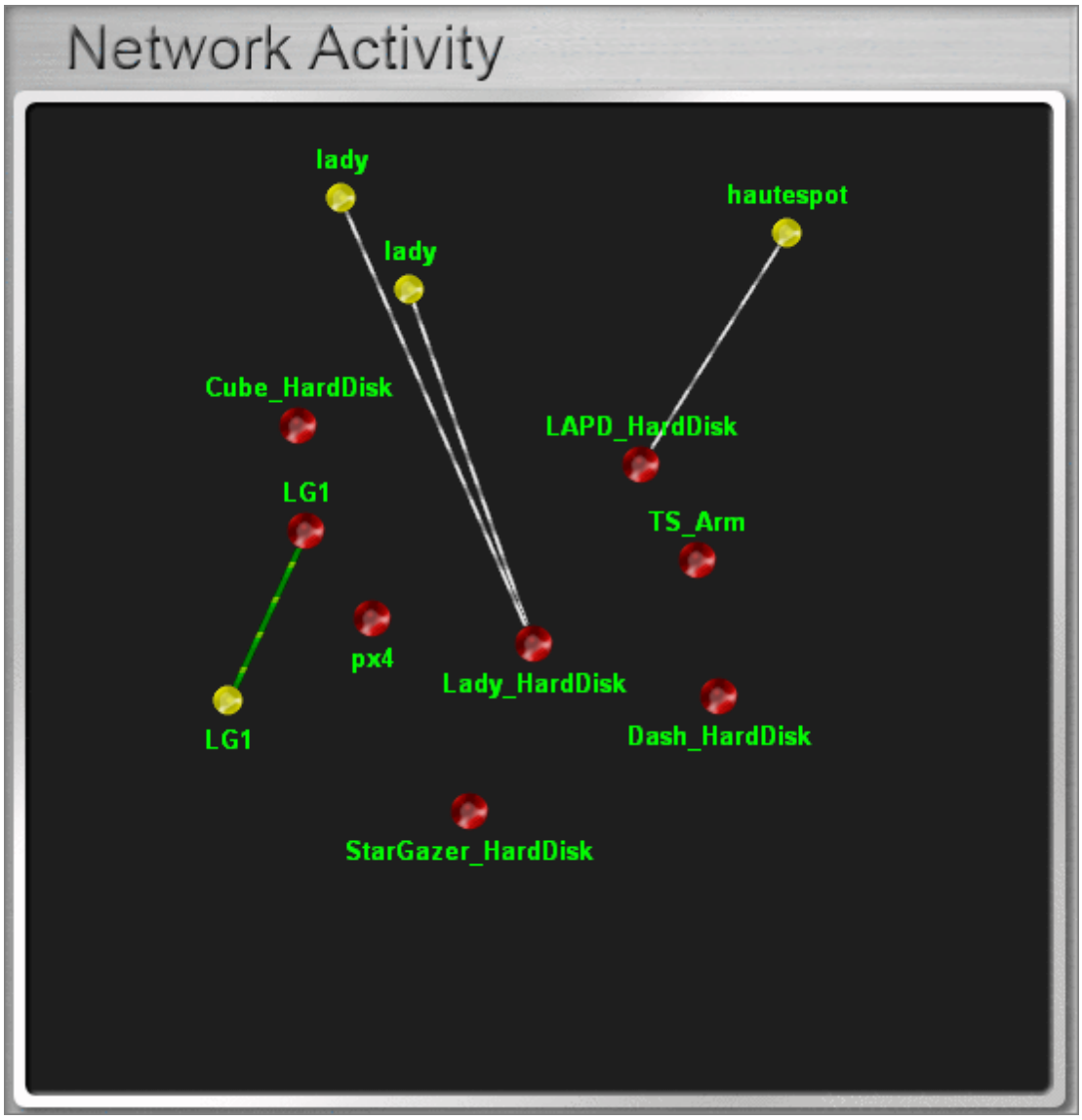

Network Activity Menu Items

Menu Items	Description
File > Exit	Close the application
Advanced > Update Fast	Increase the Network Activity screen update rate.
Advanced > Force Vault Lookup	Force a display update of Vaults active on the network.

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Menu Items	Description
Advanced > Vault Expire Fast	Clear the screen of inactive Vaults.
Advanced > Client Expire Fast	Clear the screen of inactive clients.
Help > Current Page	Open online help to the Network Activity page.
Help > Network Activity Overview	Open online help with focus on Network Activity.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > /technical Support	Open the support webpage.
Help > About Network Activity	Open the About Network Activity window.

Network Activity Symbols

Network Activity generates and places Vault symbols randomly on the window, but you can move the Vault symbols. In addition, from the Network Activity **Advanced** menu, you can modify the mode as to how the Network Activity window updates.

1. Move the mouse pointer over the Vault symbol.
2. Click and drag the Vault symbol to another location within the window.

To open Mini Vault Stats or Vault Stats move the mouse pointer over the a Vault label or symbol and right-click for the shortcut menu.

To quickly open Mini Vault Stats, double-click a Vault label or symbol.

There are many different Network Activity symbols that can display on screen. The following list identifies the symbols you may see:

Element	Description
Red circle	A Vault in the Information Repository.
Yellow circle	A client in the Information Repository.

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Element	Description
Red line, pulsing	The Information Repository is waiting for offline media and operator intervention is required.
White line, pulsing	This is normal activity showing the Information Repository is waiting for a connection slot.
Green line, pulsing	The client is waiting for a unit of media to be moved into a drive. This is common with data tape and optical libraries.
White line, stationary	A client connection is idle, waiting for resources.
Blue line, stationary	The client status is unknown.
Green line, moving	The Information Repository is transferring data; the line direction indicates the way data is moving.
Blue line, moving	A media operation is in progress; load, unload, prepare, erase, etc.

Mini Vault Stats

Mini Vault Stats provides a high level perspective of Vault activity through a graphical display of Vault performance when data is transferred from clients or between Vaults on the network.

To access Mini Vault Stats:

- From Network Activity double-click a Vault label or symbol.

Or,

1. From Network Activity, move the mouse pointer over a Vault symbol, and right-click.
2. From the shortcut menu, select **Mini Vault Stats**.

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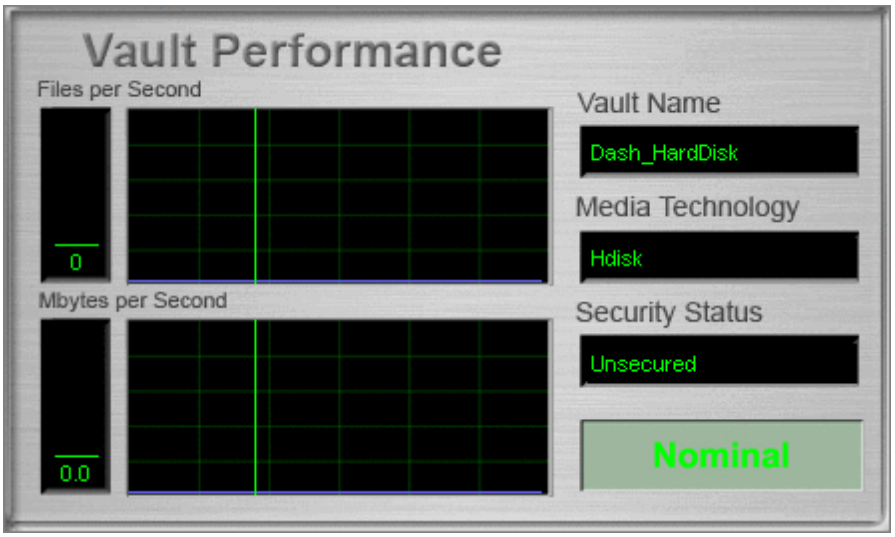

On the Mini Vault Stats window the **Files per Second** monitors performance of data transfer between Vaults and the **Mbytes per Second** displays data transfer from clients.

The display at the bottom right of the Mini Vault Stats window, shows Nominal, Media Request, or Trouble.

- **Nominal** - Everything is okay.
- **Media Request** - Request for offline media to be reloaded.
- **Trouble** - Indicates a serious problem.

Mini Vault Stats Menu Items

Menu Items	Description
File > Exit	Close the application.
Help > Current Page	Open online help to the Mini Vault Stats webpage.
Help > Mini Vault Stats Overview	Open online help with focus on Mini Vault Stats.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open Technical Support webpage.
Help > About Mini Vault Stats	Open the About Mini Vault Stats window.

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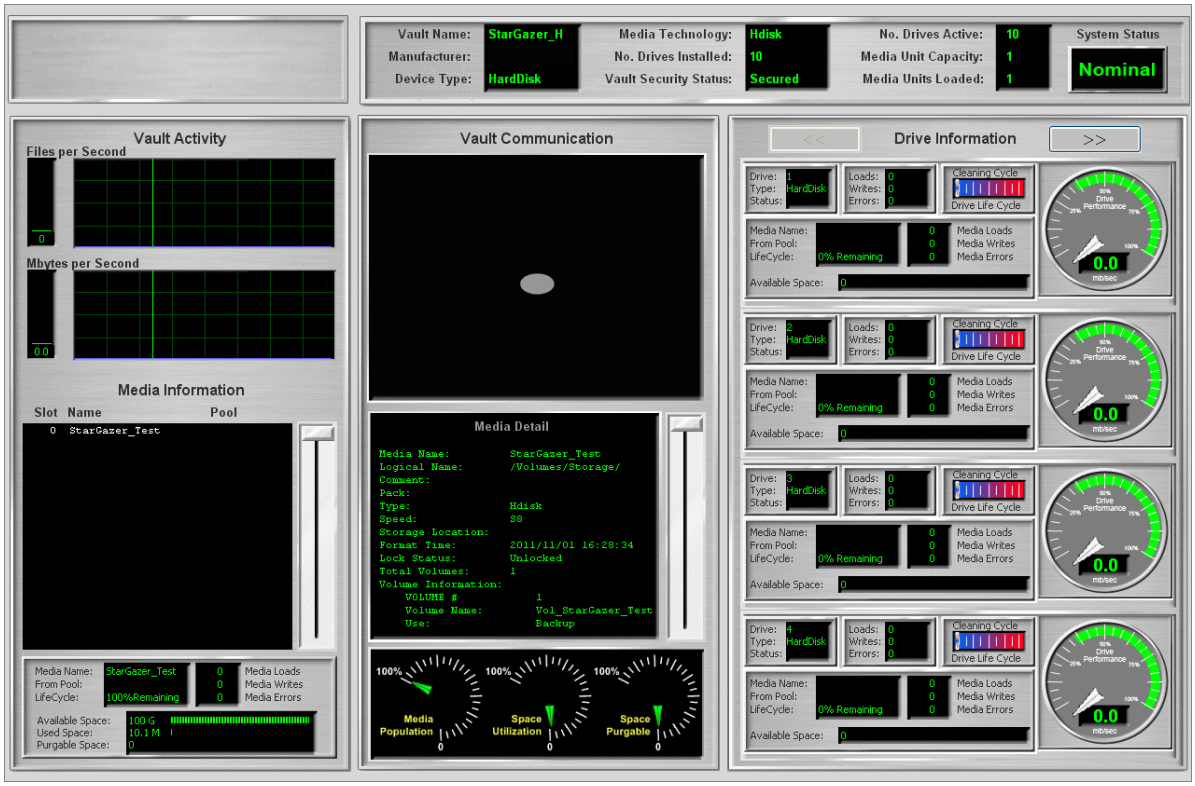
Vault Stats

Use Vault Stats to gain a detailed perspective of individual Vault activity on the network. One or multiple Vault Stats can be open at a time. Vault Stats provides perspective for daily management and troubleshooting issues that may arise on the network.

To access Vault Stats:

1. From Network Activity, move the mouse pointer over a Vault symbol, and right-click.
2. From the shortcut menu, select **Vault Stats**.

Vault Stats requires a minimum screen resolution of 1280 x 1024.



Vault Stats Menu Items

Menu Items	Description
File > Exit	Close the application.
Help > Current Page	Open online help to the Vault Stats webpage.
Help > Vault Stats Overview	Open online help with focus on Vault Stats.

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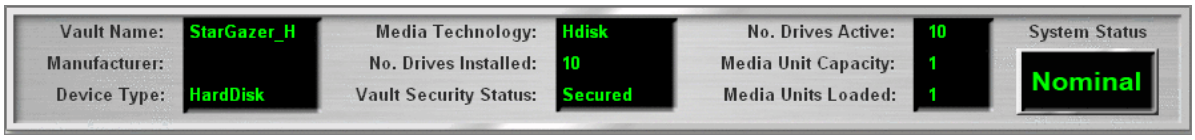
Menu Items	Description
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open Technical Support webpage.
Help > About Vault Stats	Open the About Vault Stats window.

Vault Stats Anatomy

Vault Stats displays elements to monitor such as Vault information, performance, communication, and drive and media information. The following describes each pane within the Vault Stats window:

Vault Configuration bar

Located in the Vault Stats upper-right part of the window, the Configuration bar displays information about the Vault's identity and capabilities based on the media resources available to it.



Some of the details in the pane include Vault name, manufacturer, device type, security level applied to Vault, number of drives, and media information.

The System Status can be Nominal, Media Request, or Trouble, and switches between the three depending on actual status.

- **Nominal** - Everything is okay.
- **Media Request** - Request for offline media to be reloaded.
- **Trouble** - Indicates a serious problem.

Vault Activity pane

Located in the Vault Stats upper-left part of the window, the Vault activity pane displays the overall performance in files per second and megabytes per second.

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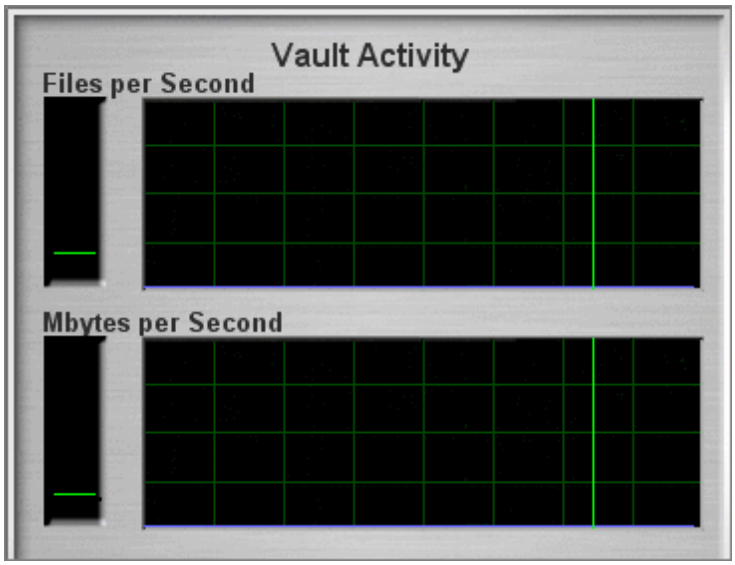

- **Files per Second** - Monitors performance of data transfer to and from Vaults.
- **Mbytes per Second** - Displays data transfer performance from clients or Vaults.

Vault Communication pane

Located in the Vault Stats upper-middle part of the window, the Vault communication pane displays connection activity. Connections can be between clients engaged in job activity, or connections to other Vaults during data migration or replication activity. Connection types are color coded to define different activities. See Network Activity Symbols.

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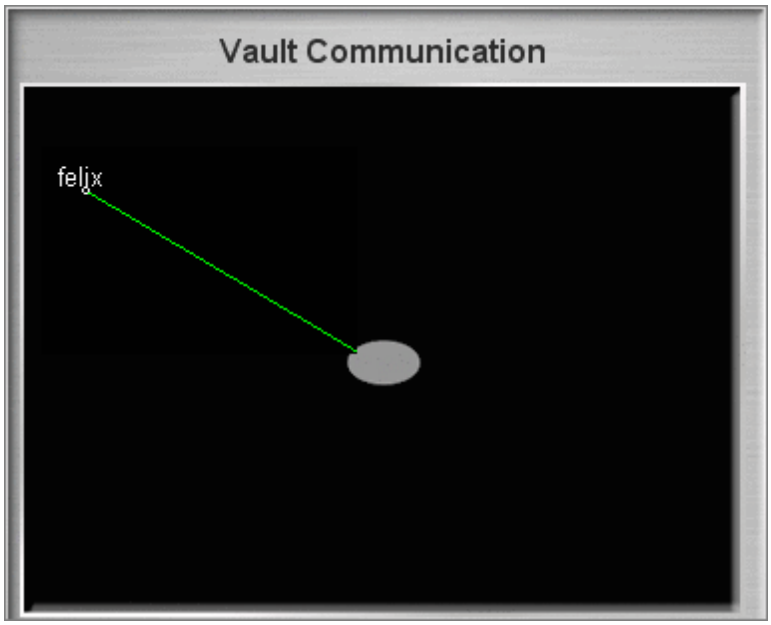
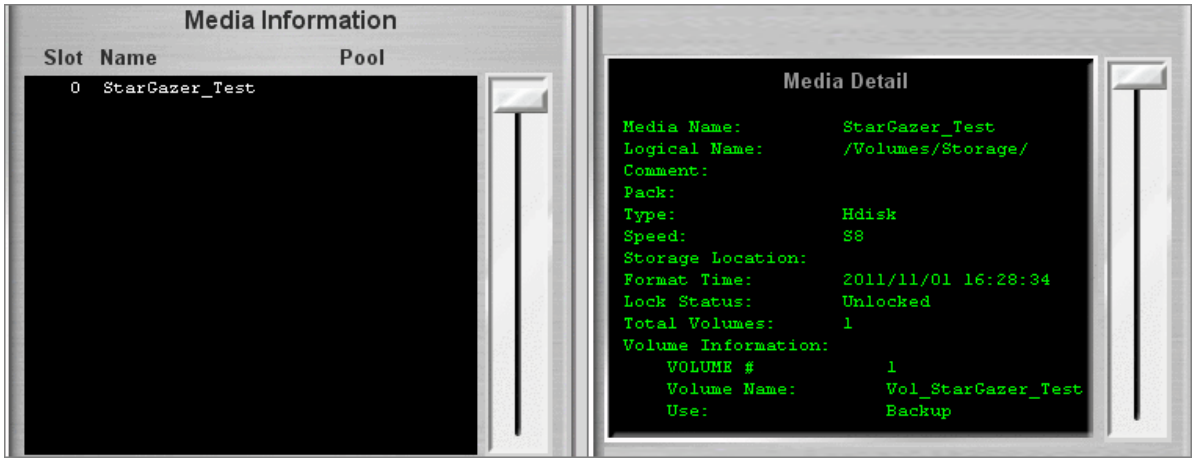


Media Information panes

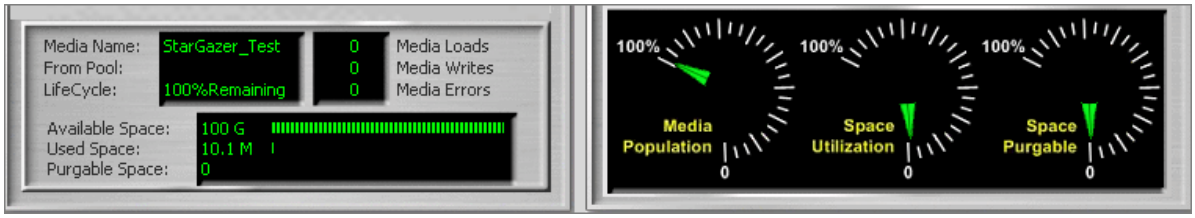
Located in the Vault Stats mid-section of the window, the media information panes include a list of media available in the Vault and then the media detail.



- From the media information pane, select a unit of media. The corresponding set of information about the media unit displays in the media detail pane.

Vault Statistics and Vault Space dials

Located in the Vault Stats lower-left part of the window, the Vault statistics and Vault space panes provide details about media in Vaults.



The left pane displays the Vault media statistics, and the right pane displays Vault space dials - each meaning the following:

- **Left dial** - Displays the percentage of the media population capacity used. It compares the amount of media loaded in the Information Repository to the amount of media that can be loaded into the Vault. For example, if a data tape library-based Vault can hold ten data tapes and has only eight loaded, the dial would indicate an 80% media population. If using hard disk Vaults, the dial would be a 100% all the time.
- **Middle dial** - Displays the overall Vault space used by stored and managed files. A dial reading of 100% would mean there is no space available.
- **Right dial** - Displays how much unneeded data is on a Vault waiting to be purged. This indicator is typically used with sequential write media formats, such as data tape. Media with non-sequential formats, such as hard disk, usually purge files immediately when a purge cycle starts. The purge files then make room for added space to the Information Repository. Data tape media requires files to be copied to other media units while reformatting the original media to complete a purge cycle. In this case, the dial would indicate how much space could be made available through the purge cycle operation.

Drive Information

Located in the Vault Stats right part of the window, each drive information pane is determined in the following way:

- **Data Tape** - One drive information pane displays for every drive in the data tape library.
- **Hard Disk** - One drive information pane displays for each data stream connection. The data stream limitations are set in Vault Admin Properties, in the **Device** tab, **Connection Resources** group. The data stream connections determine how many sessions can be running at any one time in a Vault. Setting data stream connections can help limit usage so the network does not get saturated.

Up to four drive panes can be displayed concurrently, but additional drive panes can be displayed by clicking the **Previous** or **Next** buttons. The drive information stack rotates up or down, one pane for each button click.

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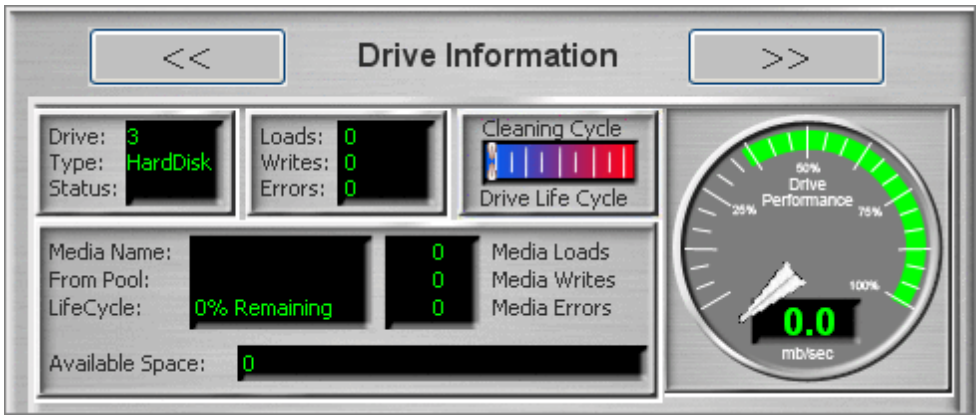

Each drive pane has three basic parts:

- **Top part** - Displays drive information of name or number, the media technology it is based on, its use and problem history, and drive cleaning and life cycle information.
- **Bottom part** - Displays information about the media the drive is using. This is the same information provided in the Vault statistics pane.
- **Right part** - Displays the drive performance, and read or write speed in near real-time. For data tape drive, the dial specifically shows the I/O (input/output) transfer rate throughout the drive. For hard disk, the dial shows data streaming usage.

Remove Vaults

Use the Phoenix DEM Add or Remove Vault Wizard to remove hard disk based Vaults, tape library Vaults, and single tape drive Vaults from your Information Repository. Removing a Vault is easy. All you have to do is remove the Vault using the wizard and then reboot the computer where you have removed the Vault.

When you remove a Vault, the data in the Vault is not erased and your license file is not affected.

Removing a Vault

1. From your suite of product applications, open the Add or Remove Vault Wizard application (AddRemVltWzrd.exe). The Welcome window appears. For complete descriptions of the wizard buttons and windows refer to Add or Remove Vault Wizard.
2. Click **Next**, for the Add or Remove window.
3. Select **Remove an existing Vault from this computer**.
4. Select **Next** for the Select window.

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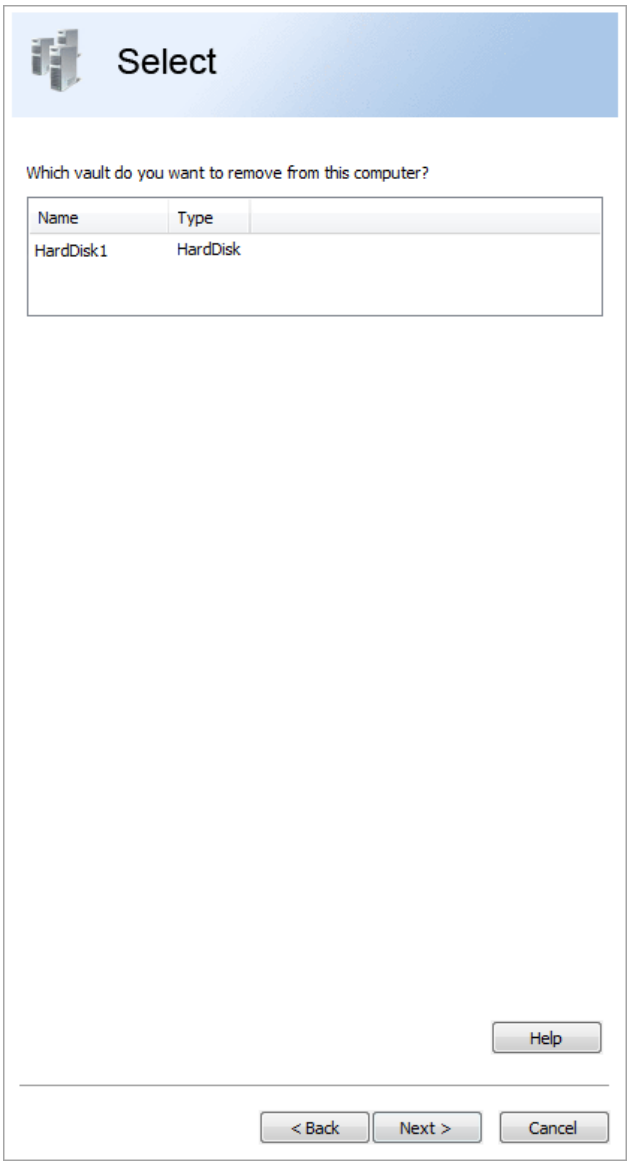

5. Select the Vault you want to remove.
6. Click **Next** for the Ready to Remove window.

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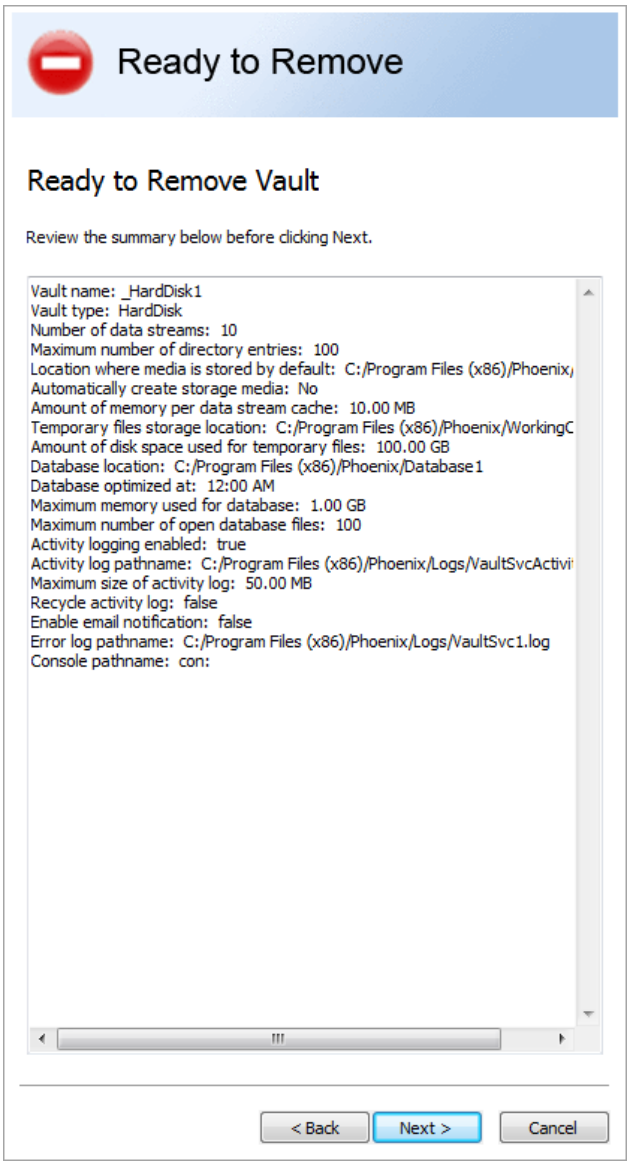
Ready to Remove
Ready to Remove Vault
Review the summary below before clicking Next.
Vault name: _HardDisk1
Vault type: HardDisk
Number of data streams: 10
Maximum number of directory entries: 100
Location where media is stored by default: C:/Program Files (x86)/Phoenix/
Automatically create storage media: No
Amount of memory per data stream cache: 10.00 MB
Temporary files storage location: C:/Program Files (x86)/Phoenix/WorkingC
Amount of disk space used for temporary files: 100.00 GB
Database location: C:/Program Files (x86)/Phoenix/Database1
Database optimized at: 12:00 AM
Maximum memory used for database: 1.00 GB
Maximum number of open database files: 100
Activity logging enabled: true
Activity log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvcActivi
Maximum size of activity log: 50.00 MB
Recycle activity log: false
Enable email notification: false
Error log pathname: C:/Program Files (x86)/Phoenix/Logs/VaultSvc1.log
Console pathname: con:
< Back
Next >
Cancel

7. Review the displayed summary for the correct Vault information.

8. When ready to remove the Vault, click **Next**.

    - Mac users will be prompted for an Administrator Name and Password. The Name field may already be populated with the name of the user running the Vault Wizard.

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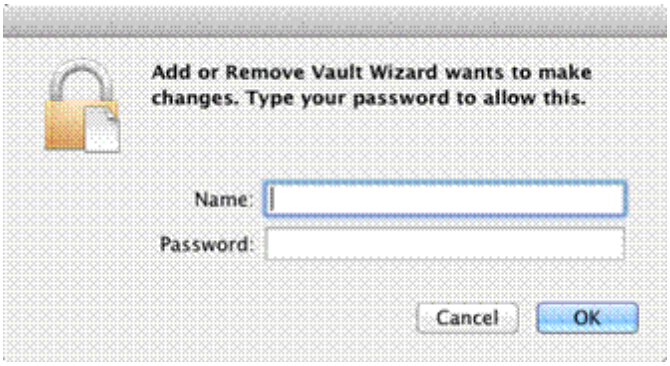

- After entering a Name and Password, click **OK**. The Vault will stop immediately.

A restart is not required on a Mac.

9. In the Completed window, click **Finish** to exit the Add or Remove Vault Wizard.

10. Restart your computer, or to remove another Vault or add a Vault, open the Add or Remove Vault Wizard again. See Adding a Vault.

Target and Process

Target and Process begins the Information Lifecycle Management process, in that it ingests data from computers on your network into SoleraTec's Phoenix DEM Information Repository. Target and Process and Target and Process Policies manage all ingest jobs from local file systems. They are responsible for initiating processing, identifying data eligible for ingesting, and pushing data to Vaults.

The tools for Target and Process are:

- **Target and Process Policies** - Target and Process Policies allows you to set up policies for ingesting files from your system into a Vault. With the policies you are designating how you want your files ingested and when; the policies can include jobs that run regularly. See Target and Process Policies.

- **Target and Process** - The Target and Process application allows you to ingest files for a one time backup or move files from your computer into a Vault. See Ingest Files Manually.

- **Target and Process Service** - This service ingests data into the Information Repository and metadata is extracted from the data and cataloged in databases. The service constantly looks for date changes in saved Target and Process policy files, runs based on the policies saved, and updates if changes are made to the policies. Target and Process Service reads an automatically created configuration file that includes all policies for a single desktop client. This configuration file is what enables the Target and Process Service to execute policies.

Target and process is responsible for ingesting files from its source into the Information Repository. It backs up or permanently moves files while the Target and Process clients control all reporting, scheduling, and network bandwidth. Each Target and Process client runs independently and manages error logging, job operation completion times, and other information for its own computer platform and file systems. Any client can read data on any computer that it has rights to and write data to Vaults it has rights to.

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Keep in mind the following when working with Target and Process:

- **Offline Media** - When data is ingested, offline media is never used as a destination.
- **Conserve Bandwidth** - It is recommended to run jobs when there is little network and client activity; during non-business hours or when users are off the network.
- **Monitor Jobs** - Keep an eye on Network Activity to see when jobs are running.
- **Move Data** - After ingesting files, use Data Service Policies to migrate, replicate, and purge data from any Vault in the Information Repository, enabling you to create an efficient and powerful multi-tiered Information Repository.
- **Load Balancing** - Use storage pools as part of the destination criteria for jobs. If there are multiple Vaults with media belonging to a storage pool, clients pick the one with the most available free space on it. This keeps the entire Information Repository load balanced.
- **Data Verification** - Phoenix DEM continually verifies the completeness and accuracy using a cyclic redundancy check as the job runs and as files are written to storage media.

Ingest Files Manually

Use Target and Process to ingest data from primary hard disk storage by running a single interactive backup job, or moving files into a Vault once, immediately or at a later time. Interactive jobs are useful for one time jobs or if you have a computer to take offline and you do not want to lose valuable data.

If you want to configure a job to run unattended on a scheduled basis, create policies with Target and Process Policies.

New Job Window

Access Target and Process from your suite of product applications, open the Target and Process application (TgtProc.exe). The first window you must interact with is the New Job window. In this window define a new job or run an existing policy (previously created from Target and Process Policies).

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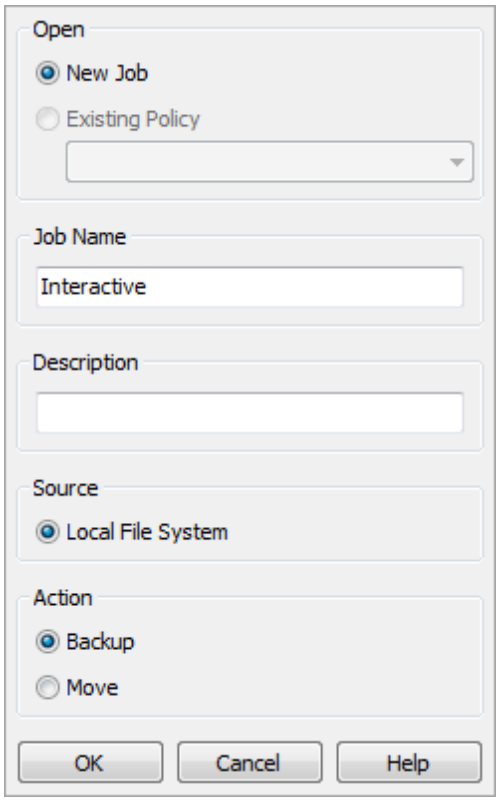

Target and Process New Job Elements

Element	Description
Open	Select either New Job or Existing Policy. **New Job** - Set Target and Process up to run a single instance job. **Existing Policy** - Elect to run a single instance of a job that has already been created using parameters from Target and Process Policies. This option is only enabled if a) a policy has been created, and b) Target and Process has correct access through the license file. When active, select a policy to use from the Existing Policy drop-down list.
Job Name	A job name is required to perform incremental or differential jobs correctly, and the job name determines which files have changed from the last Full job. By default, the job is labeled Interactive.

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Element	Description
	• Assign a job name by using any combination of letters, numbers, symbols, and spaces. It is recommended to name the job something meaningful, such as the date of the job, or the name of the type of files.
Description	Type in the text box a description to help easily identify a policy.
Source	Define the data ingest source. **Local File System** - Ingest files from computers on your network. The view of files is set to reflect contents of the local computer.
Action	Define if and how data on your network computers are processed after ingested. **Backup** - Ingests targeted files into the Information Repository. Files exist on your networked computer and in the Information Repository. **Move** - Ingests targeted files from the networked computer's file system into the Information Repository. A copy of the file exists only in the Information Repository.

After each parameter has been selected, click **OK** to save values for your job.

Workflow - Target and Process

Use the Target and Process window to run a single Target and Process job to ingest data.

1. From your suite of product applications, open the Target and Process application (TgtProc.exe). For further explanation of how to launch applications using different operating systems, see Getting Started.

2. Interact with the New Job window by selecting a **New Job** or an **Existing Policy** you have configured. Modify the **Job Name**, type a **Description**, select the job **Source**, and select the **Action**.

3. Click **Ok**, and the Target and Process **Files** tab is populated and given focus.

   If you have selected **Local File System** as the **Source**, the list displays the file structure of the local computer.

4. From the Target and Process Files tab, select data to process.

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If the file or directory selected does not have read rights, an error message generates in the log file when the policy runs. No other indication is given that the file or directory was not processed.

5. From the Target and Process Criteria tab, define target parameters, or add file and directory filters.
6. From the Target and Process Processing tab, define video and file processing options.
7. From the Target and Process Destination tab, define to where and what media is ingested.
8. From the Target and Process Scheduling tab, select whether to run a job now or at a specific day and time in the future.
9. From the Target and Process Advanced tab, set pre-processing and post-processing, log, performance, and other options.
10. Click **Start Job** to initiate the job. The **Stop** button replaces **Start Job** and focus shifts to the Output tab.
11. If you need to stop the job that is in progress, click **Stop**. In the **Stop** window, be sure to select the option to stop the job.
12. When the job is finished, click **View Results**.

See also Target and Process Policies.

Target and Process Window

The Target and Process Window consists of menu items and tabs for the sole purpose of running a job one time only.

The Target and Process application and the Target and Process Policies application share many of the same functions and options in the tabs that exist in both windows. Because of this, the Target and Process documentation refers to the Target and Process Policies documentation for individual tab descriptions. Any of the slight differences are noted.

In addition to the Files, Criteria, Metadata (if enabled), Processing, Destination, Scheduling, and Advanced tabs, the Target and Process window includes an Output tab.

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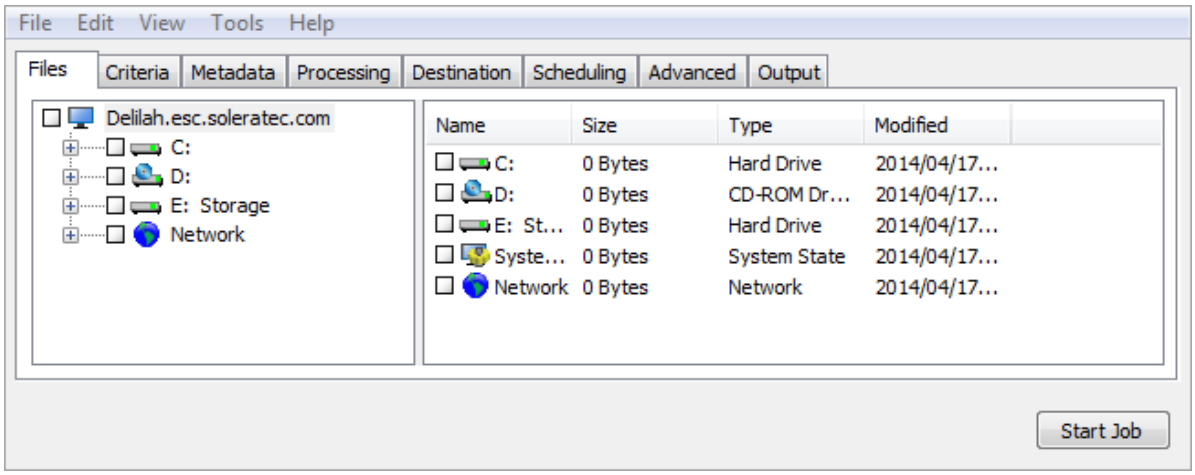

Target and Process Menu Items

Menu Items	Description
File > New Job	Open the New Job window.
File > Start Job	Click to start a job if files have been entered. The job runs based on the parameters set within the Target and Process window.
File > Stop Job	Select to terminate the job.
File > Exit	Close the application.
Edit > Clear File Selections	Clear the selection of all files in the **Files** tab.
Edit > Clear Directory and File Filters	Clear the entry from Files to Include/Exclude and Folders to Include/Exclude on the **Criteria** tab.
Edit > Clear File Selections and Filters	Clear selection of all files in the **Files** tab and clears entries from Files to Include/Exclude and Folders to Include/ Exclude on the **Criteria** tab.
View > Enable Tool Tips	A check mark by this menu item indicates that tool tips for the window are displayed. De-select to turn tool tips off.
View > Enable File Tips	A check mark by this menu item indicates that file tips for the window are displayed. De-select to turn file tips off.
Tools > User Preferences	Open Target and Process User Preferences window.

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Menu Items	Description
	User Preferences define default settings for the Target and Process window. The information in User Preferences is the exact same as what is displayed on the **Processing** tab. User preferences are a convenient way to set your commonly used options for the desktop client running Target and Process, and each subsequent time you run a job using your desktop client those settings are automatically set. You can make changes using the **Processing** tab, but those changes do not save as User Preferences and options reset to defaults for subsequent uses.
Help > Current Page	Open online help to the Target and Process webpage.
Help > Target and Process Overview	Open online help with focus on Target and Process.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open the support webpage.
Help > About Target and Process	Open the About Target and Process window.

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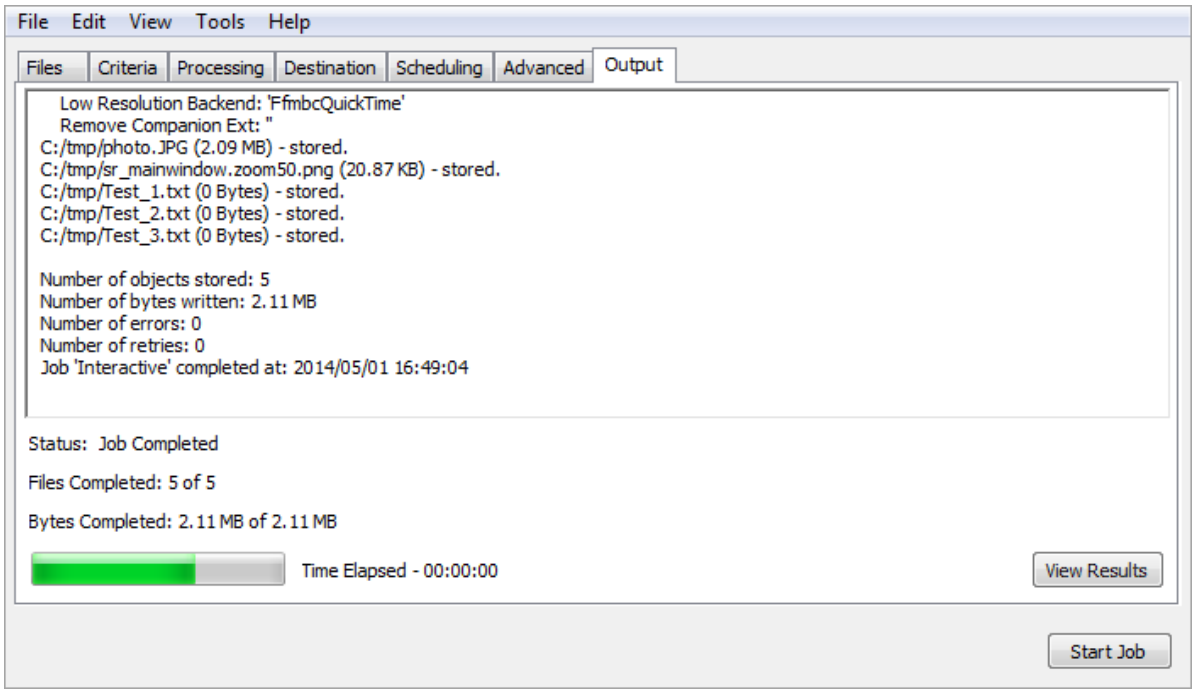
Target and Process Output Tab

In Target and Process, click the **Start Job** button to start a job. The **Output** tab is given focus, and **Start Job** is replaced with **Stop**. The **Output** tab displays information indicating how a job is working and it displays what files are being ingested. A Status bar at the bottom of the application provides a visual of the job's duration. Click **Stop** to end a job in progress.


File Edit View Tools Help
Files Criteria Processing Destination Scheduling Advanced Output
Low Resolution Backend: 'FfmbcQuickTime'
Remove Companion Ext: ''
C:/tmp/photo.JPG (2.09 MB) - stored.
C:/tmp/sr_mainwindow.zoom50.png (20.87 KB) - stored.
C:/tmp/Test_1.txt (0 Bytes) - stored.
C:/tmp/Test_2.txt (0 Bytes) - stored.
C:/tmp/Test_3.txt (0 Bytes) - stored.
Number of objects stored: 5
Number of bytes written: 2.11 MB
Number of errors: 0
Number of retries: 0
Job 'Interactive' completed at: 2014/05/01 16:49:04
Status: Job Completed
Files Completed: 5 of 5
Bytes Completed: 2.11 MB of 2.11 MB
Time Elapsed - 00:00:00
View Results
Start Job

When the job is complete, **View Results** appears and summary text is displayed, indicating how much data was ingested, if any errors were encountered, and how long the job took to complete.

To review the entire set of information, click **View Results**. A window displays where the output can be reviewed in its entirety.

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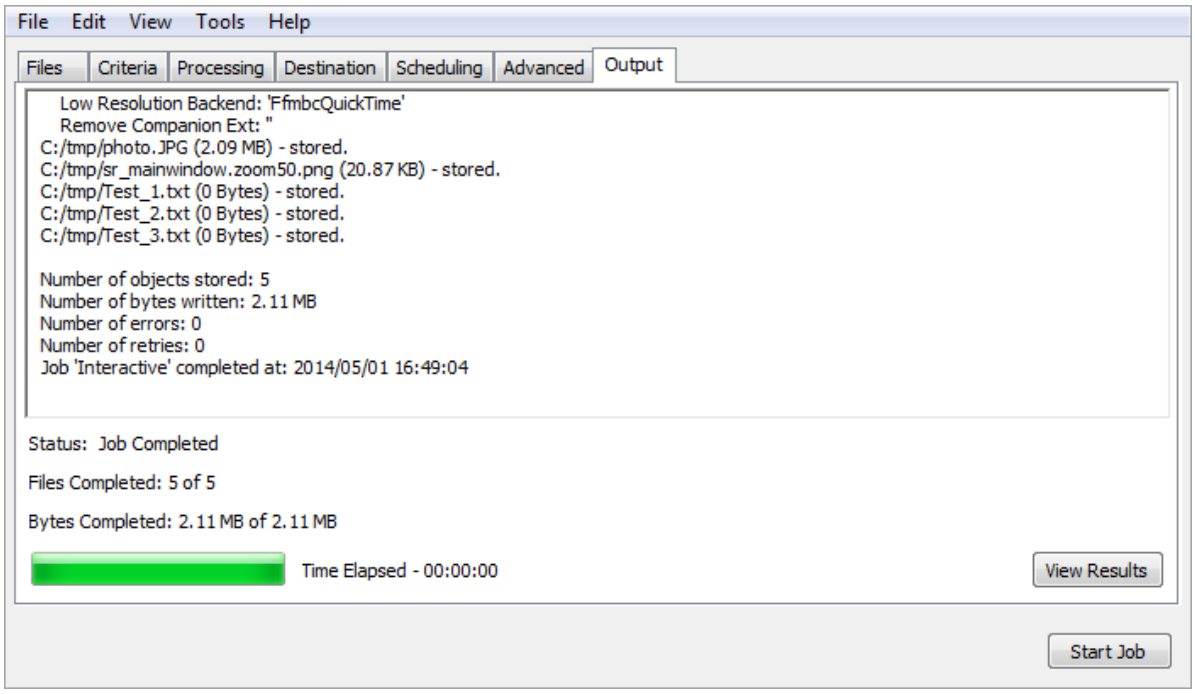
File Edit View Tools Help
Files Criteria Processing Destination Scheduling Advanced Output
Low Resolution Backend: 'FfmbcQuickTime'
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Number of errors: 0
Number of retries: 0
Job 'Interactive' completed at: 2014/05/01 16:49:04
Status: Job Completed
Files Completed: 5 of 5
Bytes Completed: 2.11 MB of 2.11 MB
Time Elapsed - 00:00:00
View Results
Start Job

To save the job output to a log file, click the **Save** button. In the Save window, name the file, ensure a save location, and then click **Save**.

Target and Process Policies

Use Target and Process Policies for setting up policies for ingesting files from your system into a Vault. The policies automatically ingest data from primary hard disk storage into the Information Repository. A policy designates which files are ingested, how you want them ingested, and when - along with many other aspects of jobs. Policies contain process parameters that include media, data source, and data destination values.

Target and Process Policies provides all the tools for creating policies that run unattended on a scheduled basis. If you want to run a single job immediately or define a single job for a specific date and time in the future, use Target and Process instead of Target and Process Policies.

Keep in mind the following for Target and Process Policies:

- Duplicate policy names are permitted.
- If making changes to a policy after it has run, be sure to run a **Full** job to ensure that all of the files are ingested.
- After creating a policy, be sure to back it up by exporting it. This enables you to easily restore (import) lost or corrupted policies. See Import or Export Policies for directions.

Target and Process Policies New Policy Elements

Element	Description

Policy Name	A policy name is required to perform incremental or differential policies correctly, and the policy name determines which files have changed from the last Full job. • Assign a policy name by using any combination of letters, numbers, symbols, and spaces. It is recommended to name the policy something meaningful, such as the date of the policy, or the name of the type of files.
Description	Type in the text box a description to help easily identify a policy.
Source	Define the data ingest source. **Local File System** - Ingest files from computers on your network. The view of files is set to reflect contents of the local computer. **Watch Folder** - Ingest **Job Control Files** located in this specified folder. Once the folder is created and the policy is active, Target and Process Services will periodically check the **Watch Folder** for **Job Control Files** having the extension **.jcf**. • **Job Control Files** contains a list of files to be ingested and have a file extension of **.jcf**. It can also contain new settings for the policy. Any new settings included in the file will override any settings in the original policy.The **Job Control File** is deleted when the policy has finished processing it. Each **Job Control File** needs to have the same format as TgtProcSvc.cfg file. For correct formatting, see the description of a TgtProcSvc.cfg file.
Action	Define if and how data on your network computers are processed after ingested. **Backup** - Ingests targeted files into the Information Repository. Files exist on your networked computer and in the Information Repository. **Move** - Ingests targeted files from the networked computer's file system into the Information Repository. A copy of the file exists only in the Information Repository.

Workflow - Target and Process Policies

The following are steps for ingesting data through Target and Process Policies:

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1. From your suite of product applications, open the Target and Process Policies application (TgtProcPolicies.exe). For further explanation of how to launch applications using different operating systems, see Getting Started.
2. If a policy does not open by default, create a policy. Before setting parameters and starting the process, a policy must be open.
3. The Target and Process Policies window opens by default with the Files tab in focus. Select data to include in the policy.
4. From the Target and Process Policies window, select the Criteria tab to define parameters for the data to ingest. Select also Target Parameters and add file and directory filters.
5. From the Target and Process Policies window, select the Processing tab to define video and file processing options.
6. From the Target and Process Policies window, select the Destination tab to define to what Vault, media, and storage pool data are ingested.
7. From the Target and Process Policies window, select the Scheduling tab to schedule recurring jobs or individual jobs.
8. From the Target and Process Policies window, select the Advanced tab to set options such as Pre-Process Commands, and Log Files Location.
9. Click **Save** to keep all policy settings and implement the policy.

Target and Process Policy Management

The following section outlines how to **create**, **modify**, and **delete** Target and Process policies. For more detailed descriptions on window items, see the Target and Process Policies New Policy Elements table.

Create a Policy

Target and Process Policies run on the computer where created and for the main purpose of backing up and moving files. To meet complex Information Lifecycle Management needs, you can create several policies, each one being responsible for a part of the overall data movement process.

1. From your suite of product applications, open the Target and Process Policies application (TgtProcPolicies.exe).
2. From the Target and Process Policies window, click the **Add** button to create a new policy.

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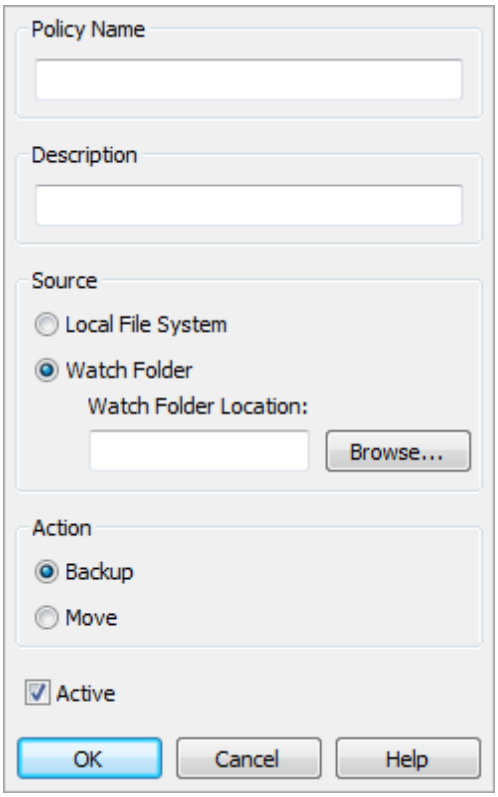

3. In the Create a Policy window **Policy Name** text box, type a name for the new policy.
4. In the **Description** text box, type descriptive text to help identify a policy. Once created, this description appears in the Target and Process Policies window next to the policy name.
5. Select a data ingest **Source.** Choose **Local File System**, or **Watch Folder**.
    - If choosing **Watch Folder**, enter a directory name in the **Watch Folder Location** section.
6. Select an Action of how data on your network computers are processed after ingested.

- **Backup** - Ingests targeted files into the Information Repository. Files exist on your networked computer and in the Information Repository.
- **Move** - Ingests targeted files from the networked computer's file system into the Information Repository. A copy of the file exists only in the Information Repository.

7. Ensure the policy is active, or de-select the **Active** checkbox if you do not want the policy to run. When the **Active** checkbox is de-selected, a caution symbol is superimposed over the policy icon in the Target and Process Policies **Policy Name** pane.
8. Click **OK**. The window closes, the policy name and description appear in the **Policy Name** pane.
9. Modify the parameters as needed on each tab for the policy. See the subsequent sections for details.

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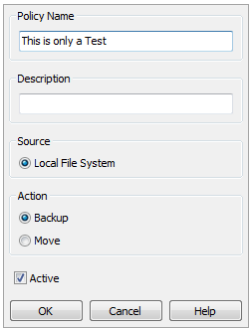
10. From the Target and Process Policies toolbar, click to save all policy settings and implement the policy.

Modify a Policy

After a policy is created and added, you can still modify it to better fit your needs. However, you cannot modify a policy's data ingest source.

1. In the Target and Process Policies window, double-click the policy name in the **Policy Name** pane. (or from the **Edit** menu, select **Modify Selected Policy**.)



2. In the Modify Selected Policy window, elect to change the **Policy Name**, the policy **Description**, and the policy **Action**.

3. Select or de-select the **Active** checkbox. If selected than the policy is set to run when implemented; if de-selected the policy will not run.

4. Click **OK** to accept policy updates, or click **Cancel** to close the Modify Selected Policy window without saving changes.

If you modify a policy while it is running, the job stops after processing the current file, and the job restarts as scheduled. For example, a job runs every day at 11:00 AM for 30 minutes. During this time, the policy is modified, so the job stops. If the scheduled start time was not changed, the job restarts at 11:00 AM the next day.

Delete a Policy

You can delete a policy that no longer meets your needs, or you can de-activate a policy and re-activate it at a later time.

Delete a policy:

1. In the Target and Process Policies window **Policy Name** pane, select a policy to delete.

2. From the toolbar click the **Delete** button.

3. From the toolbar click the **Save** button to save all policy settings and implement the policy.

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If you delete a policy while it is running, the job stops after processing the current file.

Make an active policy inactive:

1. In the Target and Process Policies window **Policy Name** pane, double-click the policy.
2. In the **Modify Selected Policy** window, de-select the **Active** checkbox.

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Import/Export Target and Process Policies

Policy import and export functionality offered by SoleraTec's Phoenix DEM allows you to save policies, restore policies, and copy sets of policies from one computer to another. After creating a set of policies, you can export them to a policy file. Then, at a later time, if you want to re-implement the set of policies or implement them for the first time on another computer, they are there for import.

Use the import and export functionality to take a snapshot of the working policy configuration, bring new computers online, test different policy configurations, or restore user corrupted policy configurations.

By default, Target and Process policies are exported to **TgtProcSvc.cfg**. Data service policies are exported to **DataSvcsSvc.cfg**.

Although each policy editor uses only one policy set at a time, multiple policy sets exported to policy files can be used. Create, name, and use any file naming convention for policy files, and be sure to keep track of where policies are exported to if it is a location other than the default location (the user's home directory).

Before restoring a set of policies to a computer that currently has policies set up, be sure to delete all of the current policies before importing other policies - otherwise imported policies are added to current policies.

Although Target and Process policies that ingest data from Microsoft Exchange Server can be created and run on only Windows computers, Exchange Server policies can be imported to, modified on, and re-exported from Linux and Mac computers.

Data Service policies are incompatible with other client policies and vice versa. If you try to import a Data Service policy into a non-Data Services policies client (or vice versa), an error message appears and no policies are added.

Import Policies

When importing policies, they are added to the policies that are already in the policy editor.

1. From the application's main menu (or policy editor), click **File** > **Import from**. The Import from window appears.
2. If you are not importing policies from your local computer, navigate to the networked computer that contains the policies that you need.
3. Select the policy file that contains the policies that you want to use.
4. Click **Open**. The policies in the configuration file are implemented.

Export Policies

1. Create policies.

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2. From the application's main menu (or policy editor), click **File** > **Export to**. The Export to window appears.

3. To save your policies with the default policy file name, click **Save** without entering a new file name. Or, enter a new name In the Export to window, and then click **Save**.

Import/Export Policy File Structure

An exported policy file is block structured but free from any column or order formatting. The tokens listed below specify job criteria. By default, policy files are exported to and imported from the locations below:

Data Service Policies	<install-dir>/Config/DataSvcsSvc.cfg.
Target and Process Policies	<install-dir>/Config/TgtProcSvc.cfg.

Files that contain policies are formatted as follows. Each policy is a single block. The beginning of each block is indicated by policy_name="<policy name>".

```
policy_name="<policy name>"
[
    <token>=<value>
    <token>=<value>
    . . .
]
policy_name="<policy name>"
[
    <token>=<value>
    <token>=<value>
    . . .
]
. . .
```

Token/Value Pairs

A token is a job attribute that is given a value that determines how the job runs.

Token/Value	Description
act_log_enabled = <*boolean*>	Enable the creation of activity logs. Valid values: true | false Default = false
act_log_pn = "<*pathname*>"	Define the path for the activity log. Supports token substitution. Default path = "%R/Logs/%P.act"

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absolute_start = <*yyyy*>/<*mm*> /<*dd*>-<*hh*>:<*mm*>:<*ss*>	The exact start time and date that the job is to run. Multiple absolute start tokens may be entered.[1, 2]
active = <*boolean*>	Define if the policy is active or inactive.[2] Valid values = true | false Default = true
admin_pn = "<*pathname*>"	The directory that contains the log, retry, and history files. Supports token substitution. Default path = "<install-dir>/JobHistory/"
any_user_retrieve = <*boolean*>	Allows any user to retrieve a file in the job, regardless of the initial read access. Valid values = true | false Default = false
audio_gen_low_res_proxy	Generate low resolution proxy audio tracks at capture/ingest. Valid values = true | false Default = true
audio_low_res_proxy_quality	Determine the quality of the low resolution proxy audio track. Valid values = High | Medium | Low Default = Medium
audio_process_components	Capture/ingest audio track files so they are readable by Phoenix DEM search applications. Valid values = true | false Default = false
audio_save_low_res_proxy	Generate low resolution proxy audio tracks at capture/ingest. Valid values = true | false Default = true
audio_save_low_res_proxy_dir_pn	The path where the copy of the low resolution proxy audio track is saved.

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	Default path = ""
backup_data	Internal use only.
backup_stub	Internal use only.
complete = <*boolean*>	Print all summary information plus the path names of the files ingested to the file indicated by the list_pn option. Valid values = true | false Default = false
compress	Internal use only.
create_job_history = <*boolean*>	Create job history files for each job. Valid values = true | false Default = false
data_paths = <*number*>	The maximum number of concurrent files that can be sent. Default = 1
description = "<*character string*>"	A description of the policy.[2] Default = blank
diag = <*boolean*>	Print diagnostic information to the file indicated by the list_pn option. Valid values = true | false Default = false
dir_spec = "<*pathname*>"	Directories to include. Multiple dir_spec options can be specified. The dir_spec check is made for every directory found. This includes the directories contained in the path name list that the job traverses. Default = "*" (any)
display_only = <*boolean*>	Cause job to search for but not store targeted files. List the files that would have been ingested. Valid values = true | false Default = false

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dst_local_only = <*boolean*>	Cause job to use only a Vault local to the computer from where service is running. Valid values = true | false Default = false
dst_media_name = "<*character string*>"	The destination media to be used. If not specified, the first available unit of media is used. Default = "*" (any)
dst_media_speed = "<*character string*>"	The destination media to be used according to media speed. Valid values = • S0 - S10 • Unspecified Default = Unspecified
dst_media_type = "<*character string*>"	The media type to be used for a job. Valid values = • Hdisk – Hard disk • 8mm – Eight-millimeter tape • Dds – Digital data storage • Dlt – Digital linear tape • Ait – Advanced intelligent tape • SuperAit • Vxa - Exabyte Vxa tape • Travan - Travan tape • Lto – Linear tape open • MagOptical – Read/write optical • NullDevice • Unspecified Default = Unspecified
dst_storage_pool = "<*alpha*>"	The name of the destination storage pool. Use "" for no storage pool name.

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	Default = "*" (any)
dst_vault_name = "<*character string*>"	The destination Vault name. If not specified, the first available Vault is used. Default = "*" (any)
dst_volume_format	Internal use only.
dst_volume_name	Internal use only.
dst_volume_pack	Internal use only.
dtu_type = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*> or dtu_type = L<*level*>	Ingest files based on time and date or job level. Valid values = • AO (Absolute Old) – Select files with a dtu (date_time_use) equal to or before the specified date. Enter the year as a 4-digit number. • AN (Absolute New) – Select files with a dtu equal to or after the specified date. Enter the year as a 4-digit number. • RO (Relative Old) – Select files with a dtu equal to or before the relative specified date. • RN (Relative New) – Select files with a dtu equal to or after the relative specified date. • L0 – Ingest all files. • L1 – Ingest all data changed since the last L0 job. • L2 – Ingest all data changed since the last L1 job. • L3 – Ingest all data changed since the last L2 job. • L4 – Ingest all data changed since the last L3 job. Default = L0

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error_log = "<*pathname*>"	The path for the error log file. If you specify "/dev/tty", error messages display on the default output device. Supports token substitution. Default path for the configuration file = "R/Logs/%P.err"
exclude_dir_spec = "<*pathname*>"	Omit directories. Accept multiple instances. Default = "" (no directories excluded)
exclude_file_spec = "<*pathname*>"	Omit files. Accept multiple instances. Default = "" (no files excluded)
ext_metadata = "<*command*>"	Extended metadata in a token/value pairs. Token/values can be found in the MetadataExtensions.cfg Format: token="<command>"token="<command>"... Default = ""
ext_metadata_plugin = "<*character string*>"	Enable the collection of extended metadata. Default = "EmdProcessNone"
file_grouping_plugin = "<*character string*>"	Enable file grouping. Default = "FgProcessNone"
file_spec = "< *pathname*>"	Files to be ingested. This token/value pair can be specified multiple times to include multiple file filters. Default = "*" (any)
follow_links	Internal use only.
host_Id = "<*character string*>"	Where the Target and Process Service runs.[2] Default = blank
include_offline	Internal use only.
job_type = <*alpha*>	Specify the job type. Valid values =

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	• backup • move Default = backup
list_pn = "<*pathname*>"	The filename where all report information is written. Supports token substitution. Default path for the configuration file is "%R/Logs/%P.log"
local_only = <*boolean*>	Specify that the ingested file is to reside on the local computer. Valid values = true | false Default = true
localize = <*boolean*>	All subsequent files in the same job are sent to the same unit of media until it is full. Valid values = true | false Default = true
lock_vault	Internal use only.
obj_type = "<*character string*>"	The policy source. Valid values = • native_fs • mse_pst • mse_msg Default = native_fs
out_of_band = <*boolean*>	Enable the application to constantly monitor its processes and select the network transmission protocol that best suits the files being processed. Valid values = true | false Default = true

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pathname = "<*pathname*>"	The path name that is searched for files matching the options. Files, directories, and wildcard expressions are valid. This token/value pair can be specified multiple times to include multiple paths. No default
pict_gen_preview_image = <*boolean*>	Generate preview image thumbnails at capture/ingest. Valid values = true | false Default = true
pict_preview_image_quality = <*boolean*>	Determine the quality of the preview image. Valid values = High | Medium | Low Default = Medium
pict_process_components = <*boolean*>	Capture/ingest picture files so that they are readable by search applications. Valid values = true | false Default = false
pict_save_preview_image = <*boolean*>	Save a preview image at the path entered in pict_save_preview_image_dir_pn. Valid values = true | false Default = false
pict_save_preview_image_dir_pn = "<*pathname*>"	The path where the copy of the preview image is saved. Default path = ""
policy_name = "<*policy name*>"	The job identifier. No default
post_proc_cmd = "<*command*>"	A post-process command that runs immediately after the job is finished. Supports token substitution. Default = ""
pre_proc_cmd = "<*command*>"	A pre-process command that runs immediately before the job starts. Supports token substitution.

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	Default = ””
process_directories = <*boolean*>	Preserve the state of directories. Valid values = true | false Default = true
ref_id = "<*character string*>"	Internal use only.
repeat_interval = <*hh:mm:ss*>	The amount of time that elapses before a job is repeated.[1, 2] Default = 24:00:00
retry_time = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	The date and time to retry the list of files not ingested. These files match all job criteria but were not sent to the Vault. You must precede the date/time value with an **A** to specify an absolute date and time or an **R** to specify a date and time relative to the end of the job. Enter the absolute year as a four-digit number (for example, 2001, 2002, etc.). Valid values = • A – Absolute date and time. • R – Relative date and time. Default = R0000/00/00-00:00:00 (retry files immediately after the job finishes)
start_days = <*mtwtfss*>	The days the job runs. Use **-** to indicate days the job should not run. For example, if the job is to run on Thursday, you would enter ---t---.[1, 2] Default = mtwtfss
start_time = <*hh:mm:ss*>	The time the job should start for each defined start day in start_days.[1, 2] Default = 00:00:00 (midnight)
stop_time = R<*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<ss>	The date and time the job is to stop. The date and time entered is relative to the start of the job. R = relative to the start of the job.

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	Default = R0000/00/00-00:00:00 (no stop time)
summary = <*boolean*>	Print the start and finish times of the job and the final statistics to the file indicated by the list_pn option. Valid values = true | false Default = true
system_info = <*boolean*>	Ingest system info and other system states. Valid values = true | false Default = false
throttle = <*setting*>	The throttle controls the amount of bandwidth used by jobs (and, the speed files are sent to Vaults). Throttle values are relative to Information Repository capacity and range from 1% to 100%. A lower setting reduces the amount of available bandwidth that is used. Default = 100
timestamp = <*alpha*>	Specify the timestamp of the file that is to be examined when determining if the file meets the dtu_type criteria. • atime - access time • mtime - modified time Default = mtime
type = <*alpha*>	The policy type of the policy file.[2] Default = tap
update_run_record = <*boolean*>	Update the job run record (<install-dir>/ JobHistory/run_record.trr) whenever a "level" job runs. Valid values = true | false Default = true
vcs = <*alpha*><*max num files*>	The number of files (F) or number of bytes (S) to ingest per single Vault connection. Valid values =

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	• F – files • S – bytes • 1 - ∞ Default = F500
version = <*number*>	The version number of the policy. The current version is 1.0.[2]
vid_extract_closed_caption = <*boolean*>	Extract closed captioning data from a video at ingest. Valid values = true | false Default = true
vid_gen_low_res_proxy = <*boolean*>	Generate low resolution proxy videos at capture/ingest. Valid values = true | false Default = true
vid_gen_preview_image = <*boolean*>	Generate preview image thumbnails at capture/ingest. Valid values = true | false Default = true
vid_low_res_proxy_quality = <*setting*>	Determine the quality of the low resolution proxy video. Valid values = High | Medium | Low Default = Medium
vid_preview_image_quality=<*setting*>	Determine the quality of the preview image. Valid values = High | Medium | Low Default = Medium
vid_process_components = <*boolean*>	Capture/ingest video files so they are readable by Phoenix DEM search applications. Valid values = true | false Default = false

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vid_save_closed_caption = <*boolean*>	Save a copy of the closed captioning data in a location specified by vid_save_closed_caption_dir_pn. Valid values = true | false Default = false
vid_save_closed_caption_dir_pn = "<*pathname*>"	The path where the closed captioning file is saved. Default path = ""
vid_save_low_res_proxy = <*boolean*>	Save a copy of the low resolution proxy video at the location entered in vid_save_low_res_proxy_dir_pn. Valid values = true | false Default = false
vid_save_low_res_proxy_dir_pn = "<*pathname*>"	The path where the copy of the low resolution proxy video is saved. Default path = ""
vid_save_preview_image = <*boolean*>	Save a preview image at the path entered in vid_save_preview_image_dir_pn. Valid values = true | false Default = false
vid_save_preview_image_dir_pn = "<*pathname*>"	The path where the copy of the preview image is saved. Default path = ""

[1]**Note:** Timing tokens are mutually exclusive. Only one timing token may be set. In other words, you may set either absolute_start, or repeat_interval, or start_days and start_time.

Sample Target and Process Policy

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The following is an example of an exported policy:

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```
#
# Start of object rule for policy_name 'Test Policy'
#
policy_name = "Test Policy"
[
    type                                = "tap"
    version                             = "1.0"
    active                              = true
    job_type                            = backup
    obj_type                            = "native_fs"
    description                         = "test"
    dtu_type                            = L0
    local_only                          = true
    follow_links                        = false
    process_directories                 = true
    timestamp                           = mtime
    backup_stub                         = false
    backup_data                         = false
    include_offline                     = false
    dst_media_type                      = Unspecified
    dst_media_speed                     = Unspecified
    dst_volume_format                   = Unspecified
    dst_vault_name                      = "*"
    dst_media_name                      = "*"
    dst_volume_name                     = "*"
    dst_storage_pool                    = "*"
    dst_volume_pack                     = ""
    dst_local_only                      = false
    localize                            = true
    start_time                          = 00:00:00
    start_days                          = mtwtfss
    stop_time                           = R0000/00/00-00:00:00
    pre_proc_cmd                        = ""
    post_proc_cmd                       = ""
    error_log                           = "%R/Logs/%P.err"
    summary                             = true
    complete                            = false
    diag                                = false
    list_pn                             = "%R/Logs/%P.log"
    display_only                        = false
    update_run_record                   = true
    create_job_history                  = false
    retry_time                          = R0000/00/00-00:00:00
    any_user_retrieve                   = false
    out_of_band                         = true
    vcs                                 = F500
    data_paths                          = 1
    throttle                            = 100
    system_info                         = false
    act_log_enabled                     = false
    act_log_pn                          = "%R/Logs/%P.act"
    ext_metadata_plugin                 = "EmdProcessNone"
```

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```
    file_grouping_plugin                = "FgProcessNone"
    vid_process_components              = false
    vid_gen_low_res_proxy               = true
    vid_low_res_proxy_quality           = Medium
    vid_save_low_res_proxy              = false
    vid_save_low_res_proxy_dir_pn       = ""
    vid_gen_preview_image               = true
    vid_preview_image_quality           = Low
    vid_save_preview_image              = false
    vid_save_preview_image_dir_pn       = ""
    vid_extract_closed_caption          = true
    vid_save_closed_caption             = false
    vid_save_closed_caption_dir_pn      = ""
    pict_process_components             = false
    pict_gen_preview_image              = true
    pict_preview_image_quality          = Medium
    pict_save_preview_image             = false
    pict_save_preview_image_dir_pn      = ""
    ext_metadata                        = "Company="Frank's Media""
    ref_id                              = 697d68f117c311e2b97588f218d4aa9b
    compress                            = false
    lock_vault                          = true
]

# end of object rule for policy_name 'Test Policy'
```

Target and Process Policies Window

The Target and Process Policies window is divided into two main panes. The left pane provides an overview of all of the Target and Process Policies in the Information Repository noting the policy name, ingest source, action, and policy description. The right pane consists of the Files, Criteria, Metadata (if enabled), Processing, Destination, Scheduling, and Advanced tabs. When a policy is selected, the tabs of the application are populated with the selected policy values, and are ready for modifications.

The first time you open Target and Process Policies, there are no policies created, so the **Policy Name** pane is empty. Before you can access any of the tabs, you need to create a policy. Use the Target and Process Policies toolbar to create a new policy by clicking the **Add** button. The toolbar consists of the following buttons:

- Save all policy settings. Created or modified policies are implemented only if you save them.

- Add a new policy.

- Delete the selected policy.

The Target and Process Policies window is described below:

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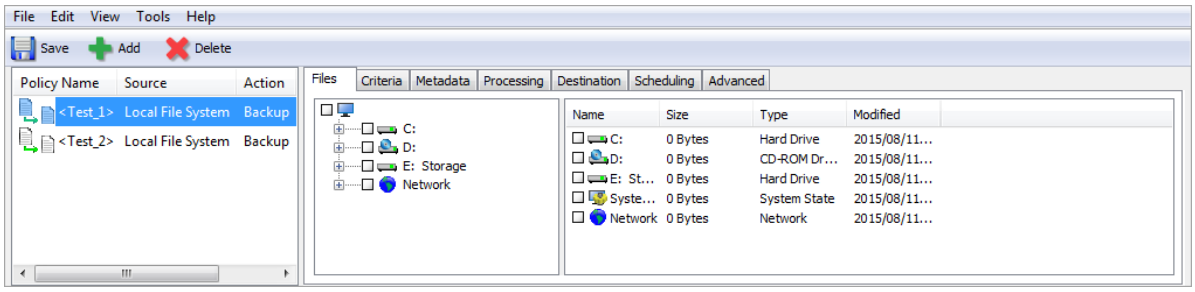
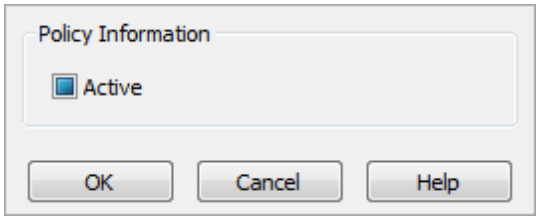


A triangular caution symbol on the policy icon in the left pane of the window indicates that the policy is not active.

From the left pane, you can edit the **Active** setting of a policy. Setting a policy to **Active** allows the policy to run. You can edit the active setting of policies by right-clicking on an individual policy or multiple selected policies (select multiple policies by holding the**Shift** key or the **Control** key and clicking on the desired policies), choosing **Change Active Setting** from the shortcut menu, either selecting or de-selecting the **Active** option in the dialog box, and then clicking **OK**. Click the **Save** button in the toolbar to implement any changes immediately.

When multiple policies are selected with different current active settings, the checkbox will be shaded to indicate the selected policies have different **Active Settings**.



Target and Process Policies Menu Items

Menu Items	Description
File > Save All	Keep the information for the current policy.
File > Import from	Open the Import from dialog box to select and activate a new configuration file. The dialog box is opened to the default folder where configuration files are stored.
File > Export to	Open the Export to dialog box to save an active configuration file. The dialog box is opened to the default folder where configuration files are stored.
File > Exit	Close the application. If changes have not been saved then a confirmation dialog box opens asking, "Do you want to save your changes?" Click **Yes**, **No**, or **Cancel**.

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Menu Items	Description
Edit > Clear File Selections	Clear the selection of all files in the **Files** tab.
Edit > Clear Directory and File Filters	Clear the entry from Files to Include/Exclude and Folders to Include/Exclude on the **Criteria** tab.
Edit > Clear File Selections and Filters	Clear selection of all files in the **Files** tab and clears entries from Files to Include/Exclude and Folders to Include/ Exclude on the **Criteria** tab.
Edit > Create a Policy	Open the Create a Policy window.
Edit > Modify Selected Policy	Open the Modify Selected Policy window to make changes to an existing policy.
Edit > Delete Selected Policy	Open a Confirmation dialog box to affirm the selected policy for deletion. Click **OK** to delete the policy selected in the **Policy Name** pane. Click **Cancel** to exit the dialog box without taking action.
Edit > Delete All Policies	Open a Confirmation dialog box to affirm the deletion of all policies from the configuration file. Click **OK**, and policies no longer appear in the **Policy Name** pane. Click **Cancel** to exit the dialog box without taking action. See Delete a Policy.
View > Enable Tool Tips	Check mark by this menu item indicates that tool tips for the window display. The tips are brief descriptions of window controls if the mouse pointer is moved over a control. De-select to turn tool tips off.
View > Enable File Tips	Check mark by this menu item indicates that file tips for the window display. A file tip is a file's name, and it appears if the mouse pointer is moved over a file name. De-select to turn file tips off.
View > Enable Policy Tips	Check mark by this menu item indicates that policy tips for the window display. To view the box of policy tips, point your mouse over a policy in the **Policy Name** pane. De-select the menu item to turn file tips off.
Tools > User Preferences	Open Target and Process Policies User Preferences window.

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Menu Items	Description
	User Preferences define default settings for the Target and Process Policies window. The information in User Preferences is the exact same as what is displayed on the **Processing** tab. User preferences are a convenient way to set your commonly used options for the desktop client running Target and Process Policies, and each subsequent time you run a job using your desktop client those settings are automatically set. You can make changes using the **Processing** tab, but those changes do not save as User Preferences and options reset to defaults for subsequent uses.
Help > Current Page	Open online help to the Target and Process Policies webpage.
Help > Target and Process Policies Overview	Open online help with focus on Target and Process Policies.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open the support webpage.
Help > About Target and Process Policies	Open the About Target and Process Policies window.

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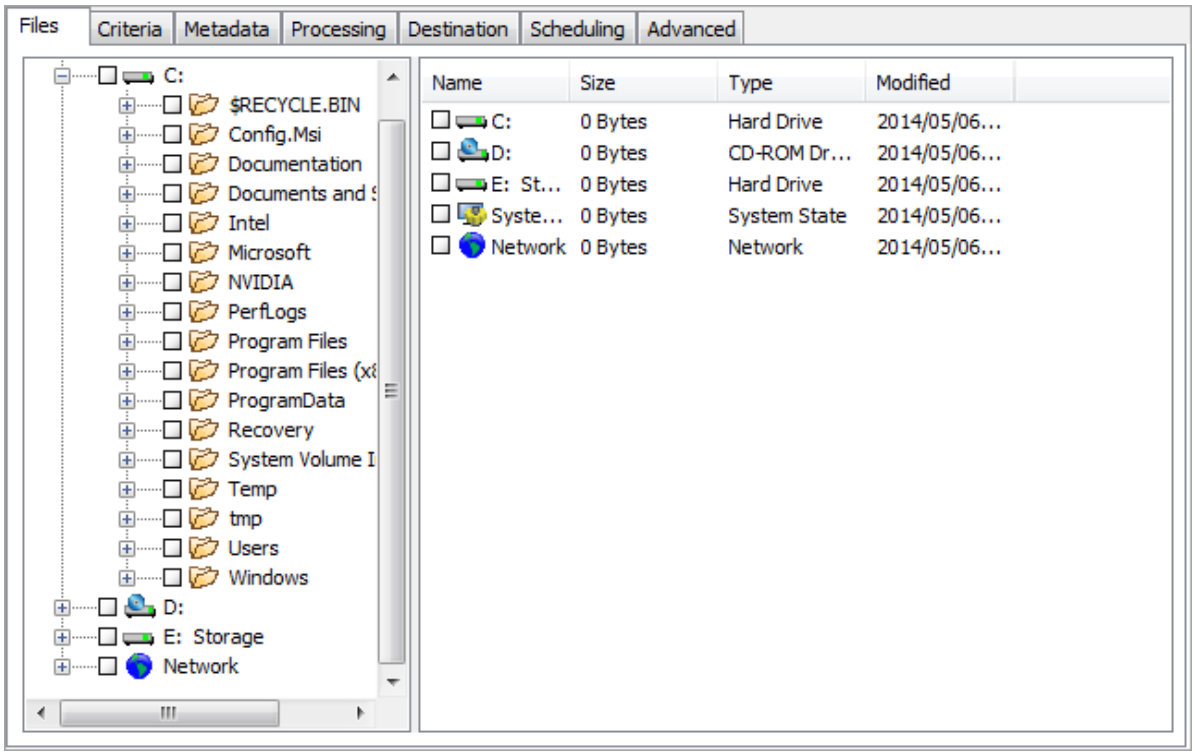
Target and Process Policies Files Tab

Use the **Files** tab for selecting files to ingest. The file navigation and file selection works much like doing it in Windows Explorer, and the contents of the tab depends on the ingest source or policy source selected. The **Files** tab contains two panes. The left pane contains a directory tree, and the right pane displays network, computer, drive, or folder contents and details (Name, Size, Type, Modified).

If you have selected **Watch Folder** as the Source, the **Files** tab will be disabled.

If you have selected **Local File System** as the Source, the list displays the file structure of the local computer.



- Select or de-select the data to include or exclude. Do this by navigating to and clicking the object with the system mouse or by navigating to the object with the keyboard and selecting the object with the SPACE BAR.
- When a folder or file has been excluded from the job or policy and is marked by a red check mark , it has a corresponding exclusion filter on the Criteria tab. To modify the de-selected file or directory, first delete the filter. If a folder or directory is selected where you do not have read rights, an error message is printed in the log file when the policy runs - and no non-processing indication is given.
- To sort the entities in the **Files** tab right pane, click the **Name**, **Size**, **Type**, or **Modified** column header. The list of objects reorder, in ascending order, according to the category clicked.

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- Target and Process Policies - If selected files cannot be found because they have been deleted from the computer, Target and Process Policies puts filters into the **Criteria** tab indicating that the missing files are not to be processed. This prevents error messages in job output. If files are restored to the system, the filters disappear.

Icons and Symbols

The following checkboxes, icons, and symbols can be seen in the **Files** tab.

Checkboxes

Icon	Meaning
☐ (an empty checkbox) in front of an object (drive, folder, or file)	A de-selected object is not included for processing by a policy. Move the mouse over the object to change the cursor into a check mark and click to add the object for processing. If you do not have rights for processing the given object, the object is not processed. Select the checkbox to include a drive, folder, or file in the process. A ☑ appears. Sub-objects contained in the selected object are also included.
☑ (blue check) in front of an object	The selected object, and its contents, are included in the process — unless a specific object is de-selected beneath the selected object. In this case, the ☑ is replaced by ☒. The top-level object remains checked even if sub-objects are excluded.
☑ (gray check) in front of an object	The selected object contains objects that are not included in the process.
☒ in front of an object	The selected object, and its contents, are excluded from the process. To exclude a drive, folder, or file from a policy, click the ☑ next to an object or navigate to the object with your keyboard and press SPACE BAR. The ☑ changes to a ☒. When the ☒ appears, an exclude filter is written to the Criteria tab/ Directory Filters or File Filters. To include an object that has been marked ☒, go to the **Criteria** tab and delete the exclude filter that applies to the object.

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Information Repository Objects and View Controls

Icon	Meaning
	Represents a network.
	Represents a network.
	Represents a single computer.
	Represents a tape Vault.
	Represents a disk Vault.
	Represents a single virtual or actual hard-drive. Virtual media refers to space set aside for use by a Vault on a storage device. A hard disk is an example of virtual media. Media units on a hard disk are actually file system directories set up by the Vault. Mapping a Vault to an entire hard disk, virtual hard disk media can be removed from Vaults just like physical media (such as tapes). Virtual media units can span multiple disk drives or be set so several virtual media units reside on a single disk drive.
	Represents a single glass media drive.
	Represents a single tape drive.
	Represents a collection of drives.
	Represents tape media that is online.
	Represents tape media that is offline or unloaded.
	Represents disk media that is online.
	Represents disk media that is offline or unloaded.
	Represents folders.
	Represents individual data files.
	Represents individual Microsoft Exchange Server (PST) files.
in front of an object	The object holds other networks, computers, drives, or folders beneath it. Click the expand indicator (plus sign) to expand the view of an object. The object's contents and details appear in the right pane.

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Icon	Meaning
⊟ in front of an object	The object holds other networks, computers, drives, or folders beneath it. When an object's contents are displayed in the right pane, the contents remain displayed even after the object is collapsed and until a different object is selected. Click the expand indicator (minus sign) to collapse the view of an already expanded object.

Target and Process Policies Criteria Tab

Use the **Criteria** tab after you have selected the files to include in the job or policy from the Files tab. The **Criteria** tab allows you to refine the ingest parameters.

Remember that if you make changes to a policy after it has run, select **Full** from the **Target Parameters** drop-down list and run it. Doing this ensures that files affected by the changes are ingested.

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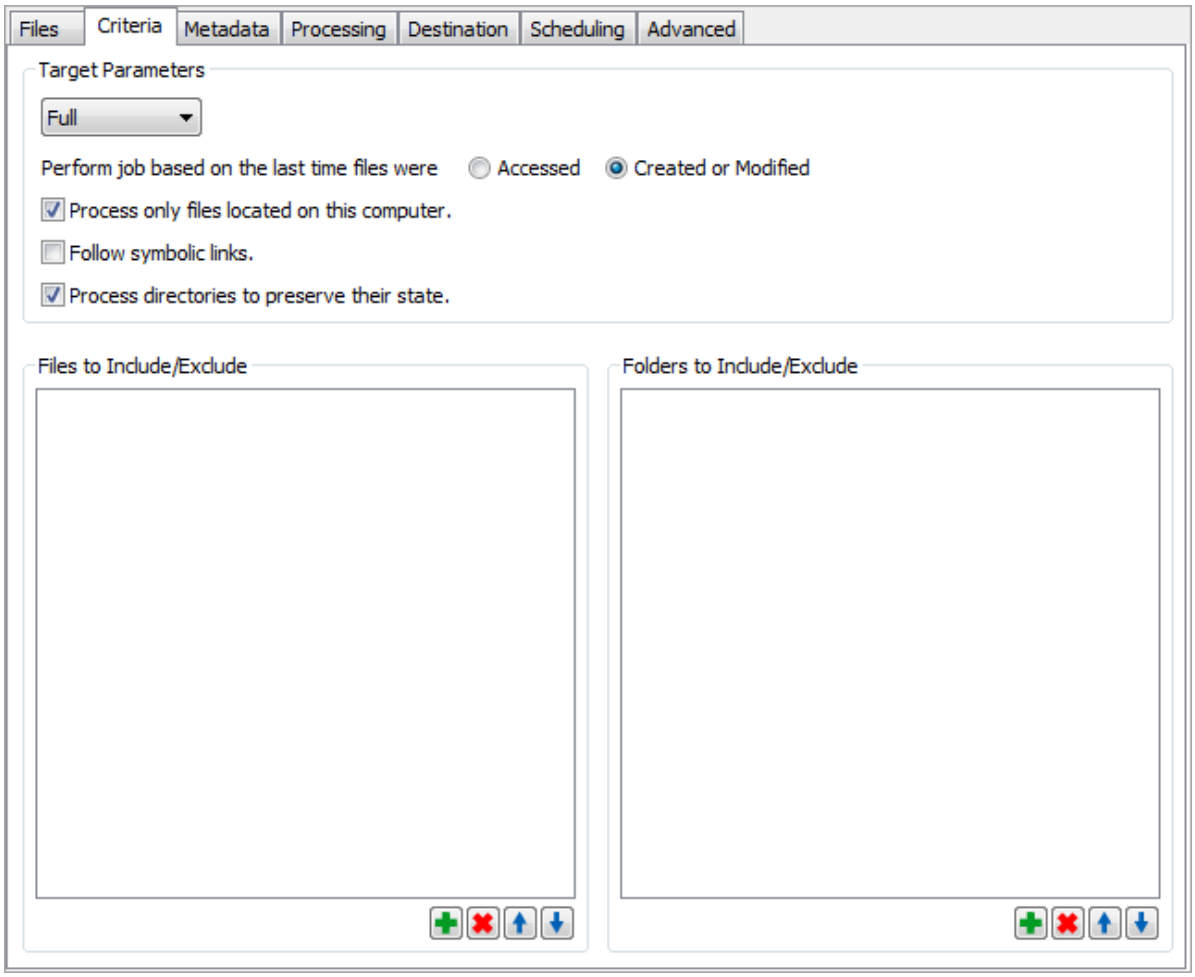

If selected files from the **Files** tab cannot be found because they have been deleted from the computer, Target and Process Policies puts filters into the **Criteria** tab indicating that the missing files are not to be processed. This prevents error messages in job output. If files are restored to the system, the filters disappear.

Target and Process Policies Criteria Tab Elements

Element	Description
Target Parameters	Since jobs will most likely be running repeatedly on the same folders in primary storage, opt to re-processing the files selected from the **Files** tab. Use the **Target Parameters** drop-down list to specify the job level you want to run. The job level refers to whether jobs re-process files that have already been ingested into the Information Repository:

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Element	Description
	Full - All selected files are ingested every time the job runs. Full jobs can be run whenever and can work in conjunction with Incremental or Differential jobs. **Incremental** - Only selected files that have changed since the most recent Full or Incremental ingest job was run are ingested. Incremental jobs are intended to work in conjunction with Full jobs and other Incremental jobs (as needed). **Differential** - Only selected files that have been created or changed since the most recent Full job are ingested. Differential jobs are intended to work in conjunction with Full jobs and other Differential jobs (as needed) **Level** - Any new files or files that have changed since the immediately lower level job are ingested. This enables you to create multiple policies that work in a coordinated manner. For example, you can run a Level 0 (full) job Friday night and a Level 1 job Saturday through Thursday. When selected, a drop-down list appears for you to provide the level of job to use. Level 0 is a Full job (ingests all selected files each time the job runs). Level 1 processes any files that have changed since the last Level 0; Level 2 processes any files that have changed since the last Level 1, etc. For example, a Level 1 job processes files that have been created or changed since the last Full job (Level 0). A Level 3 job processes any missed files and files that have been created or changed since the last Level 2 job, and so on. If no files were missed in the previous level job and no files have been created or changed, then no files are processed. **Time/Date** - Ingest files according to absolute date and time or relative amount of time. When selected, a drop-down list and the Time and Date buttons appear. Use the drop-down list to select an option by processing files that have been accessed or modified after a specific date and time or by processing files relative to when they were last accessed or modified. For example: • Relative to a specific date and time - "...before 05:23 PM on Tuesday, June 5, 2007" • Relative to amount of time - "...not in the past 7 days, 4 hours, and 23 minutes, and 10 seconds"

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Element	Description
	To change the time and date parameters to process files before or after an absolute data and time, select from the drop-down list and use the Time and Date buttons. Or, to process files either before or after a relative amount of time, select from the drop-down list and the appropriate value using the Period of Time window. Work in a coordinated manner. To do this, the coordinated jobs must share the same policy name. For example, if one policy runs a Full job on Friday and you want to create another to run Incremental jobs Monday through Thursday, both policies must have the same name. Similarly, to create three coordinated policies; one for Level 0 jobs, one for Level 1 jobs, and one for Level 2 jobs, all three policies must have the same name. It is recommended not to create coordinated policies mixed with Incremental, Differential, and Level jobs. Timestamps are checked for each processed file. When files have irregular timestamps (created or modified), results may be unpredictable. For example, when using a setting other than Full, files with a date in the future do not process until the date is reached; files with a Windows creation timestamp earlier than 1970 process as a date in the future.
Perform job based on the last time files were...	Determine the eligibility of files for jobs based on when they were accessed, created, or modified. The option selected changes the Target Parameters **Time/Date** drop-down list options. • **Accessed** is the last time the file was touched. • **Modified** is the last time the file was changed. • **Created** is the time the file was created. • **Status Changed** is the last time the file's status (permissions, ownership, etc) was changed. These options are different for Windows, Mac, and Linux systems. • **Windows** - Select from **Accessed** or **Created or Modified**.

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Element	Description
	• **Mac** - Select from **Accessed**, **Created or Modified**, or **Created or Modified or Status Changed**. • **Linux** - Select from **Accessed**, **Modified**, or **Modified or Status Changed**.
Process only files located on this computer	Determine how remote files are handled. • Select the checkbox to limit the job to the files on the local host computer. De-select to include files on remote computers.
Follow symbolic links	Determine how files with symbolic links are handled. If selected, any symbolic links associated with data in the job are included in the job. If de-selected, symbolic links are not ingested. This feature is for use with Linux and UNIX based hosts as Windows does not support symbolic links. In Windows, if only a shortcut file is selected, then it alone is ingested. To ingest a file where a shortcut points, the file must be selected.
Process directories to preserve their state	Use to preserve original owners and rights of directories during retrieval. This option also enables the restoration of empty directories.
Files and Folders to Include/Exclude	After making general selections of files and folders to process from the options above, you can apply filters to refine which files or folders to process. **Exclude** filters - Rule out specific files or folders from a job. **Include** filters - Include only specific files or folders in a job. For more information see Filters and Wildcards.

Target and Process Policies Metadata Tab

The creation and configuration of the MetadataExtensions.cfg text file is necessary to view the **Metadata** tab in Phoenix DEM applications where the application reads the file (such as in Target and Process, and Target and Process Policies), and for optional extended metadata searches in applications such as Search and Retrieve and the Video Content Manager. The **Metadata** tab only displays if it has been configured. The configuration process is intended for advanced users.

Extended metadata enables you to ingest custom metadata that you want associated with files. When you need to find and retrieve data at a later time, you can search using the extended metadata collected at ingest. The metadata ingested using Target and Process and Target and Process Policies can be searchable using Search and Retrieve and other Phoenix DEM search applications.

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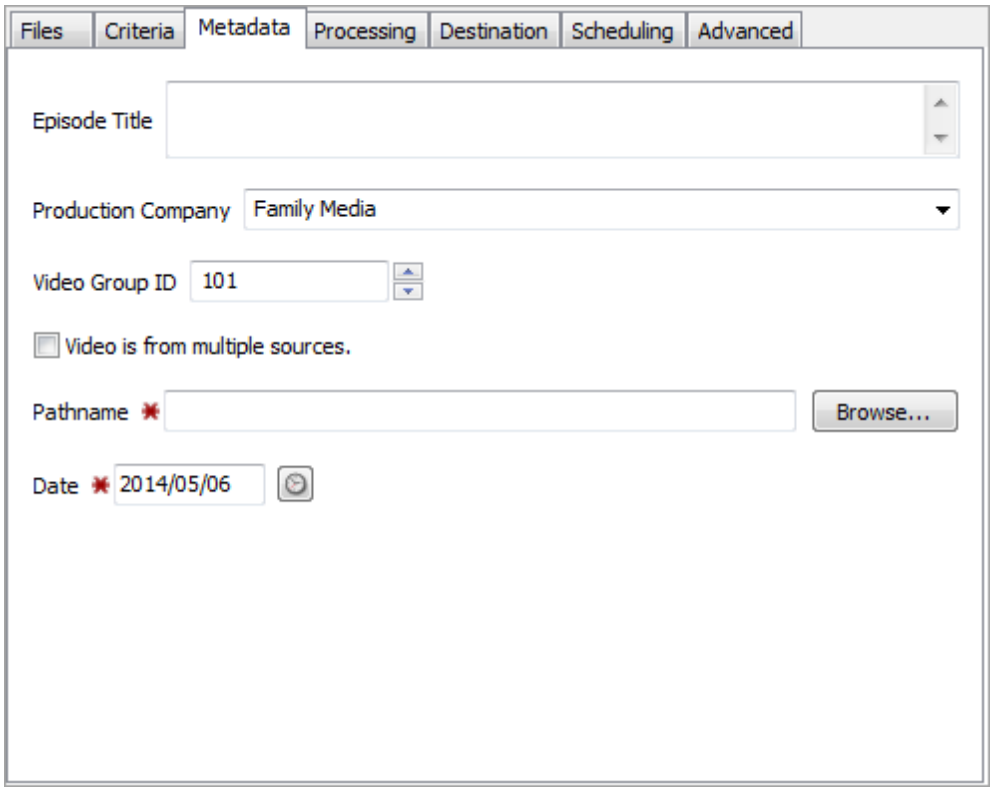
Metadata extensions for Target and Process, Target and Process Policies, Search and Retrieve, and other Phoenix DEM search applications are all covered in MetadataExtensions.cfg.

The Metadata tab appears in Target and Process, Target and Process Policies, Video Content Manager, and Search and Retrieve only if these applications find a MetadataExtensions.cfg file in <install-dir>**\Config**.



The red asterisk next to Pathname means that it is a required field.

When you create, configure, and implement a MetadataExtensions.cfg, **Metadata** tabs appear in Target and Process, and Target and Process Policies; they contain the Query blocks listed in the **IngestMdExt** block.

Target and Process Policies Processing Tab

Use the **Processing** tab to define settings for how you want to process files or video. The contents on the **Processing** tab are the exact same as displayed in User Preferences. The preferences entered in at the **Processing** tab override any defaults that may be set in the User Preferences window, but only for the current job or policy.

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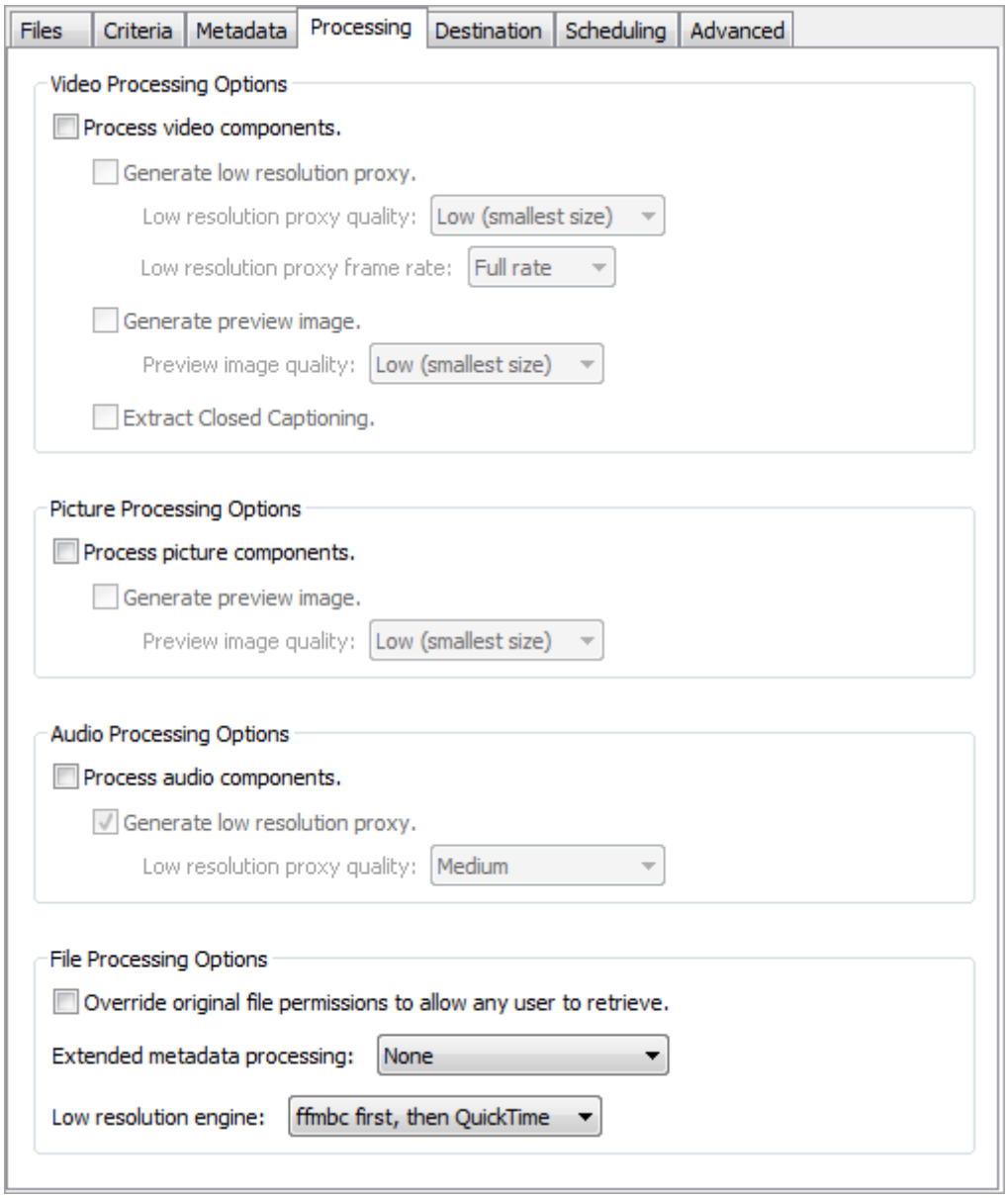

Video Processing Options

Use these options to ingest video files for viewing. Elect to generate low resolution proxy videos (also called companion files), preview images during video ingest, or extract closed captioning. The low resolution proxies and preview images have a relatively small file size, making it quick and easy to search for video files and clips without having to wait for the retrieval of large, original video files.

Select the **Process Video Components** checkbox to process video and for the associated options to enable. If not selected, video files ingest, but search applications cannot open and view them as video files, and preview images are not generated.

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Elements	Description
Generate low resolution proxy	1. Select to generate low resolution companion files. If not selected, the proxies do not create, but you can always view the original video in the Information Repository. The low resolution file is a fraction of the size of the original video size. When searching for video, the low resolution video is the primary video footage received, but it is always teamed with the original source video. The original, stored either online, near-line, or offline is totally accessible when needed and under full Phoenix DEM management. 2. Select a resolution quality setting for the proxy/ companion video. A lower setting produces a smaller file. • **High** - Same frame size as original, high video quality, audio is compressed to QDesign 44kH. • **Medium** - 320x240 frame size, medium video quality, audio is compressed to QDesign 44kHz • **Low** - 320x240 frame size, low video quality, audio is compressed to QDesign 14kHz Alternatively, you are able to use third party software to create low resolution proxy files that will be included with the ingested video or image. See Telestream Vantage and FlipFactory for more information and setup instructions. Phoenix DEM is unable to generate thumbnails and low resolution proxies for files that are not videos or images.
Generate preview image	1. Select to generate a preview image; if not selected a preview image is not created. 2. Use the Preview image quality drop-down list to select a resolution setting. A lower setting produces a smaller file. • **High** - Original size • **Medium** - 320x240 • **Low** - 100x75

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Elements	Description
Extract Closed Captioning	1. Select to extract closed captioning text (if it exists), and to search against its contents. The extracted closed captioning text becomes the base for performing script searches when viewing a video in a media player, or when creating a search in the **Search Criteria** pane. Closed captioning text may be extracted from mpeg-2 video files if it exists in the picture user data as defined in the EIA-708 standard. Alternatively, you can ingest a closed caption file, when ingesting the video file, instead of having it generated. The ingested file must have the name <filename>_cc.srt, where <filename> is the name of the video it corresponds to. Target and Process will not generate a closed caption file if you supply your own.

Picture Processing Options

Use these options to ingest picture files for viewing in Phoenix DEM search applications. Elect to generate preview images, or thumbnails, when picture files are ingested. Since these files are typically a smaller file size, searching for picture files is quick and easy, without having to wait for the retrieval of large, original picture files.

Select the **Process Picture Components** checkbox to process picture files and for the associated options to enable. If not selected, picture files are ingested but the preview images are not generated and viewable in Phoenix DEM search applications.

Phoenix DEM is unable to generate preview images for picture files with file names that contain `, ", $, or \.

Elements	Description
Generate preview image	1. Select to generate preview images. If not selected, preview images do not create, but as long as the **Picture Processing Options** checkbox is selected, you can view picture files in the Information Repository. 2. Select an image quality resolution setting for when preview images are generated. A lower setting produces a smaller file. • **High** - Original size

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Elements	Description
	• **Medium** - 320x240 • **Low** - 100x75

Audio Processing Options

Use these options to ingest audio track files for viewing in Phoenix DEM search applications. Elect to generate low resolution proxy audio track files are ingested. Since these files are typically a smaller file size, searching for audio track files is quick and easy, without having to wait for the retrieval of large, original audio track files.

Select the **Process Audio Components** checkbox to process audio track files and for the associated options to enable. If not selected, audio track files ingest, but search applications cannot open and view them as audio track files.

Elements	Description
Generate low resolution proxy	1. Select to generate low resolution companion files. If not selected, the proxies do not create, but you can always view the original audio track in the Information Repository. The low resolution file is a fraction of the size of the original audio track size. When searching for audio tracks, the low resolution audio track is the primary audio track received, but it is always teamed with the original source audio track. The original, stored either online, near-line, or offline is totally accessible when needed and under full Phoenix DEM management. 2. Select a resolution quality setting for the proxy/companion audio track. A lower setting produces a smaller file. • **High** - Audio is compressed to QDesign 44kH. • **Medium** - Audio is compressed to QDesign 44kHz • **Low** - Audio is compressed to QDesign 14kHz Alternatively, you are able to use third party software to create low resolution proxy files that will be included with the audio track. See Telestream Vantage and FlipFactory for more information and setup instructions. Phoenix DEM does not generate thumbnails for audio track files.

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File Processing Options

Use to set processing options for permissions, file processing, and metadata processing.

Elements	Description
Override original file permissions to allow any user to retrieve	Phoenix DEM adheres to the level of rights and access control that is set for the operating system where files are ingested from. Typically, only the owner, author of the files or a system administrator with administrative or root level access privileges is able to view, open, and retrieve files in the Information Repository. • Select to allow access on stored files so any user can retrieve files. This feature negates all protection associated with your files; anyone on your network using Phoenix DEM can access your stored files.
Extended Metadata Processing	Add custom metadata to files that are being ingested. In contrast to the Metadata tab, which allows you to manually add metadata during ingest processing, the Extended Metadata Processing allows you to programmatically add metadata, on a per directory or per file basis, during ingest processing. • Ingest.ExtMetadata, <filename>.md, and script files have diverse purposes, select from options: **None** - No extended metadata processing. **Use Ingest.ExtMetadata** - Affects files in its own folder and child folders. If a child folder has its own Ingest. ExtMetadata, files in that folder and its child folders use it instead of a Ingest.ExtMetadata in a parent folder. **Use '.md' file** - Adds metadata only to files that have an identical filename and reside in the same folder. For example, if a .md file is created and named films.md and it is placed in a folder in primary storage, metadata would be added, at ingest, only to the file named films.doc in the same folder. **Use script** - Adds metadata based on a user-provided script file located in the Config folder in the Phoenix installation directory. The file must be named UserExtMdProc.bat (for Windows) or UserExtMdProc.sh (for Linux/Mac). This script file will create an XML file for the metadata values that will be added at ingest with the files being ingested.

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Elements	Description
Low resolution engine	Choose which engine to use to generate low resolution proxies when ingesting files. • Select from options: **ffmbc first, then QuickTime** **QuickTime only** **ffmbc only** **ffmpeg only** **default** - This will be your system default.

Setup for Extended Metadata Processing

Using Ingest.ExtMetadata and <filename>.md

There are three different delimiters available for use when creating a Ingest.ExtMetadata or a <filname>.md file. You can use a:

- Equal sign: <token>="<value>"
- Tab: <token> "<value>"
- Comma: <token>,"<value>"

Delimeters must be consistent within the file and cannot be mixed. The first delimiter found (equal sign, tab, or comma) will be used as the delimiter when parsing the rest of the file. The following example uses an equal sign (=) as the chosen delimeter.

```
DVD_Title="The Passion of the Christ"
Actors="James Caviezel Monica Bellucci Maia Morgenstern Christo Jivkov
Francesco De Vito"
Directors="Mel Gibson"
Writers="Mel Gibson Benedict Fitzgerald"
Producers="Mel Gibson Bruce Davey Enzo Sisti Stephen McEveety"
Format="AC-3 Closed-captioned Color Dolby DTS Surround Sound DVD Full
Screen Subtitled NTSC"
Language="Hebrew"
Subtitles="English Spanish"
Region="1"
Aspect_Ratio="1.33:1"
Number_discs="1"
DVD_Release_Date="2004/08/31"
```

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```
Run_Time="127 minutes"
```

Tokens may not contain spaces, and values must be enclosed in quotation marks.

When using an equal sign as a delimiter, there can be no white space before or after the equal sign.

If you use multiple values for a single token and want to find a single value using a Phoenix DEM search application, search using "contains". If you searched using "equals", only results that match the full string of multiple values would be returned.

Implement an extended metadata Ingest.ExtMetadata or <filename>.md file

1. Create the Ingest.ExtMetadata or <filename>.md file using any text editor.
2. Name it either Ingest.ExtMetadata or <filename>.md depending on the functionality you want.
3. Copy Ingest.ExtMetadata to a folder where all files have associated metadata. Copy <filename>.md to folders where a specific file, named identically to <filename>, is to have associated metadata.
4. Select an extended metadata option from the **Extended metadata processing** drop-down list on the **Processing** tab.

Using Script

Selecting the option **Use script** for extended metadata processing will add metadata based on a user-provided script file. There are two phases to processing extended metadata: **Process** and **Finalize**. In each phase, certain parameters are passed to the user-provided script file in a file in the following format:

```
<EmdScriptParameters>
    <Phase>Process</Phase>
    <TargetFile>/file/being/stored</TargetFile>
    <IsContainer>No</IsContainer>
    <OutMdFile>/location/of/output.xml</OutMdFile>
</EmdScriptParameters>
```

`Phase` = `Process` or `Finalize`

`TargetFile` = The file being stored in the Information Repository

`IsContainer` = `Yes` or `No` and indicates whether the target file is a container (directory) or a file

`OutMdFile` = The location of the XML output file that the script will generate

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The above example is in the first phase, **Process**. When Use script is chosen on the Processing Tab of Target and Process Policies, Target and Process Policies calls the user-provided script and passes it a file with the arguments listed in the example above. The script needs to create an XML file for the metadata in key/value pairs. These key/value pairs will be contained within ExtendedMetadata tags as shown below.

```
<ExtendedMetadata>
    <Key>Value</Key>
    <Key>Value</Key>
    <Key>Value</Key>
</ExtendedMetadata>
```

The XML output file needs to be created in the location specified by the **OutMdFile** parameter that was passed to the script by Target and Process Policies.

After the XML file has been created by the user-provided script and the Process phase is complete, Target and Process Policies will call the script again with a new file. Now it is in the **Finalize** phase and the preliminary XML metadata values will be included in the EmdScriptParameters block that is passed to the script.

```
<EmdScriptParameters>
    <Phase>Process</Phase>
    <TargetFile>/file/being/stored</TargetFile>
    <IsContainer>No</IsContainer>
    <OutMdFile>/location/of/output.xml</OutMdFile>

    <ExtendedMetadata>
        <Key>Value</Key>
        <Key>Value</Key>
        <Key>Value</Key>
    </ExtendedMetadata>

</EmdScriptParameters>
```

At this point during the Finalize phase, the user-provided script will have a chance to normalize the preliminary metadata values that were included within the EmdScriptParameters block and make any corrections or changes if needed. The script will create a new XML file with the final metadata values at the location specified by the **OutMdFile** parameter that was passed to the script by Target and Process Policies during the Finalize phase. The final XML file at the location specified by the OutMdFile parameter will be used by Target and Process Policies to create metadata that will be processed and included with each file or folder that is being ingested.

To see an example script file, go to http://www.SoleraTec.com and visit the Phoenix DEM Resources page.

Implement an extended metadata Script file

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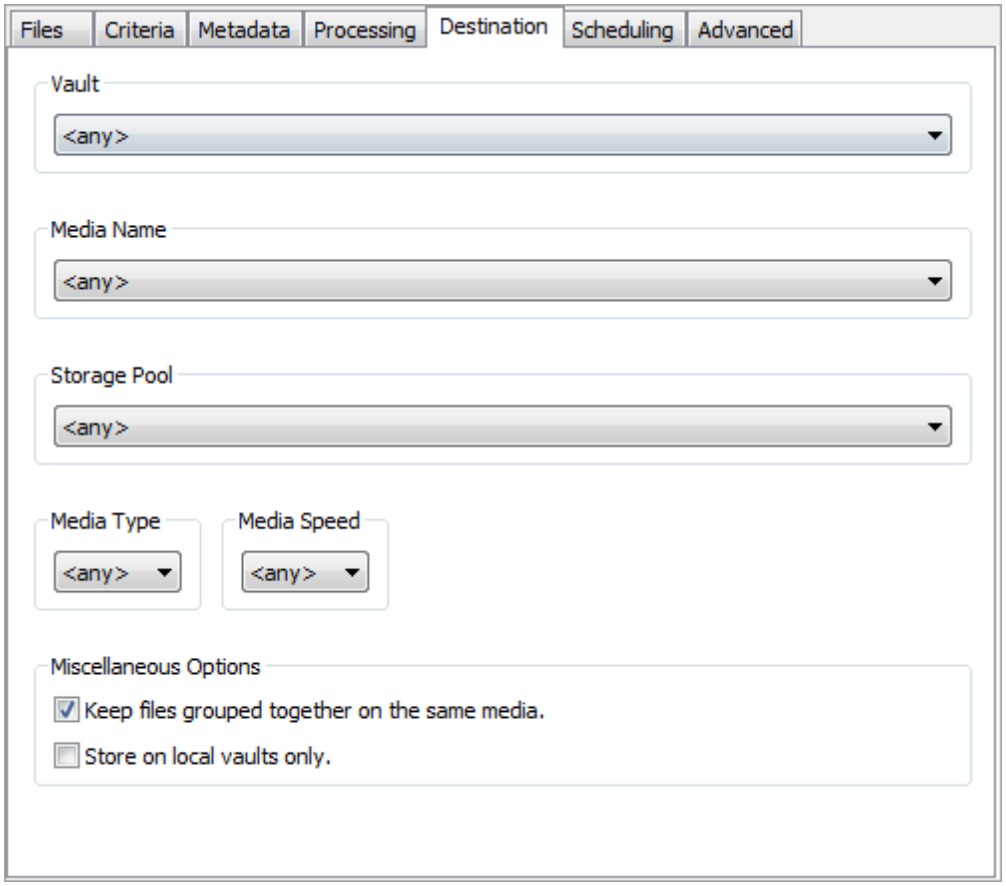
1. Create the batch/script file that will produce metadata in an XML format (as shown above).
2. Name the existing file **UserExtMdProc.bat** (Windows) or **UserExtMdProc.sh** (Linux or Mac).
3. Place the file in the Config folder in the Phoenix installation directory.
4. Select the **Use script** option from the **Extended metadata processing** drop-down list on the **Processing** tab.

Target and Process Policies Destination Tab

Use the **Destination** tab to define criteria to determine in what Vaults, media, and storage pools to ingest your files to. Read this section before you set Vault, Media Name, Storage Pool, Media Type, and Media Speed parameters.



Only the default names of <any>, <unnamed>, <new entry>, or implemented names of Vaults, storage pools, media, media types, and media speeds already in the Information Repository appear in the **Destination** tab drop-down lists. New names with associated parameters appear also, once added.

You can enter names of new Vaults, media, or storage pools to the Information Repository before actually adding them, the names will appear beneath <any> in the given field. However, it is recommended to select only media that appears in the drop-down list, otherwise you may increase chances of error.

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There are several options for populating the **Destination** tab fields:

- **Leave the default values (<any>)** - Phoenix DEM determines the most accessible Vault and the media with the most free space.
- **Select a parameter and let Phoenix DEM take care of the rest** - For example, if the Media Speed of S8 is selected, then only media running at the speed associated with S8 writes. Or, if Storage Pool or Media Name is selected, then files are only sent the storage pool or media selected. With a selected Vault, Phoenix DEM uses the most available Vault or media with the most free space.
- **Select a parameter and select available parameters from remaining fields** - If a Vault, Media Name, or Storage Pool parameter is selected, then remaining fields have limited options available which correspond to the parameter.

To reset the **Destination** tab with all parameters from any field, select **<any>** in the **Vault** group.

Several units of media can be assigned to a single storage pool. See Prepare Media - Storage Pool.

- **Create a new entry for a Vault, Media Name, or Storage Pool** - From the Vault, Media Name, or Storage Pool drop-down list, select **<new entry>**. The Enter New Name window appears for you to type a new name. Click **OK** and the new entry appears in the field's drop-down list.

This method is recommended only for special circumstances. If a job is run with a Vault or media that is not actually running in the Information Repository, the job fails.

The <any> item in the drop-down list also acts as a divider between Vault, media, and storage pools implemented and those not implemented. Names above <any> are the ones running in your Information Repository, and the names below <any> are entered but do not yet have hardware implemented in the Information Repository. These are not saved if not selected when saving the policy.

The limitations to adding a new name for a Vault, Media Name, or Storage Pool are:

- Typing a new name for the Vault, Media Name and Storage Pool options are limited to <any> and <new entry>.
- New entries in Media Name or Storage Pool do not limit options in the remaining fields.
- Wildcard additions (for example, Ac*), appear beneath <any>. See Wildcards.

Target and Process Policies Destination Tab Elements

Element	Description
Vault	From the drop-down list select a Vault, or select **<new entry>** to add a new Vault name.

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Element	Description
	If a Vault is selected, the Media Name drop-down is automatically populated with the media on the given Vault. If a new entry is given, then the Media Name and Storage Pool options are limited to <any> or <unnamed> and <new entry>.
Media Name	Media Name refers to the names of individual units of media in the Vaults within the Information Repository. From the drop-down list select the media, or select **<new entry>** to add a new media name. The system automatically looks for any storage pools comprised of the selected media. If it cannot find any, then the Storage Pool drop-down list displays <any>.
Storage Pool	Storage pools are groupings of media on a single policy used for a particular purpose. For example, if you had a policy called "Night backup" and it wrote to several units of media, you would use a "Night backup" storage pool and assign to it every unit of media to use for that purpose. For more information see Prepare Media, Storage Pool. From the drop-down list select a storage pool, or select **<new entry>** to add a new storage pool name.
Media Type	Determine the types of media a policy uses by specifying a media type. For example, if "Hdisk" is selected, then only Hdisk media is used. Media Type is useful for processing data of lower importance or less rigorous recovery time objectives. From the drop-down list select the media type. Only media types for the parameters selected in the Vault, Media Name, or Storage Pool drop-down lists are displayed. If none were selected, then only the media types from media available within the Information Repository is displayed. Set either Media Type or Media Speed, but not both.
Media Speed	Source files run based on speed and media performance. This is useful for processing data of lower importance or less rigorous recovery time objectives. Hard disk is considered a high performance media and is assigned a high rating of (S8). Slower data tape technologies are lower performance and are assigned a lower rating of (S0).

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Element	Description
	From the drop-down list select a performance rating. Only media speeds for the parameters selected in the Vault, Media Name, or Storage Pool drop-down lists are displayed. If none were selected, then only the media speeds from media available within the Information Repository is displayed. Set either Media Type or Media Speed, but not both.
Miscellaneous Options	Select **Keep files grouped together on the same media** to have Phoenix DEM write files to the same media. If de-selected, targeted files store across the Information Repository on whatever media has the most space and best availability. Select **Store on local Vaults only** to store files on the host computer where the policy lives.

Target and Process Policies Scheduling Tab

Use the **Scheduling** tab to define when a job is to run.

The Target and Process application and the Target and Process Policies application share many of the same functions and options in the tabs that exist in both windows. Because of this, the Target and Process documentation refers to the Target and Process Policies documentation for individual tab descriptions.

The Scheduling tab differs slightly between Target and Process and Target and Process Policies:

- **Target and Process** - Since Target and Process is used to run a job once, only **When should the job run?** with options of now or later, and **Should the job be stopped before it is completed?** displays on the **Scheduling** tab.
- **Target and Process Policies** - Jobs can be scheduled to run on a daily or weekly basis while setting only a few general parameters, or jobs can be scheduled using exact dates and times with specific parameters set. A scheduled job is implemented as soon as the policy is saved (assuming all other parameters are acceptable).

By default, new Target and Process policies are scheduled to run every night at 12:00 AM.

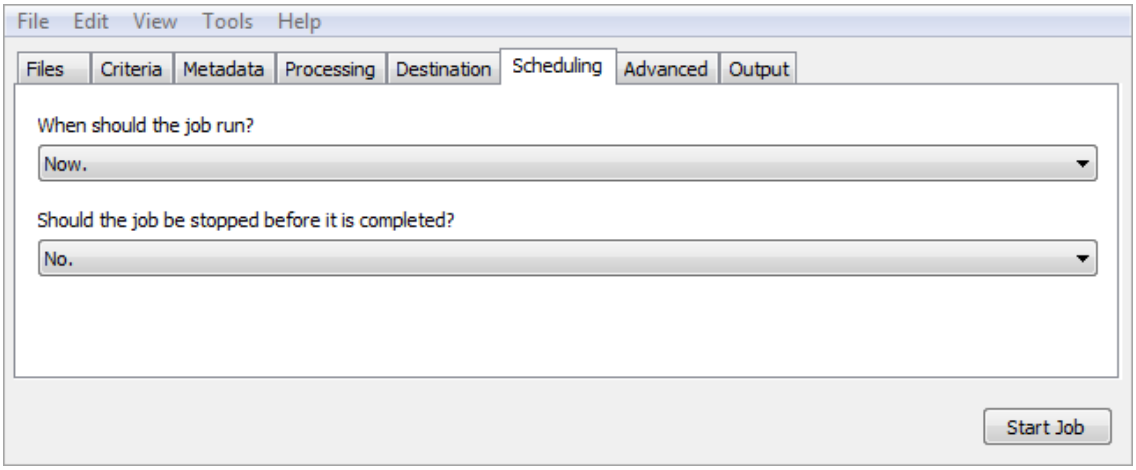
Scheduling a Job

The Scheduling tab displays different fields to populate depending on the parameter set for the **When should the job run?** option.

Target and Process

From the **When should the job run?** drop-down list, select one of the options to schedule a process. Each are described below.

- Option 1: Now
- Option 2: At a later date and time



Now

Use this option to start a job immediately.

- Click the **Start Job** button. The process starts (granted the values on the other tabs are accepted), and the focus shifts to the Output tab. Use **Stop** to end a job before it is completed.

At a later date and time

Use this option to schedule a single job to run at a later time.

1. The Date window opens automatically to select the day for the job to run, then the Time window opens to select a time for the job to run.
2. Click the **Start Job** button, and the focus shifts to the **Output** tab. Click **Stop** to end a job before it is completed.

Should the job be stopped before it is completed?

- Determine if the job should be stopped before it is done. This is useful if another process could conflict with this job. If you select **Yes**, the Duration window appears.

See also Target and Process, Ingest Files Manually and Target and Process window.

Target and Process Policies

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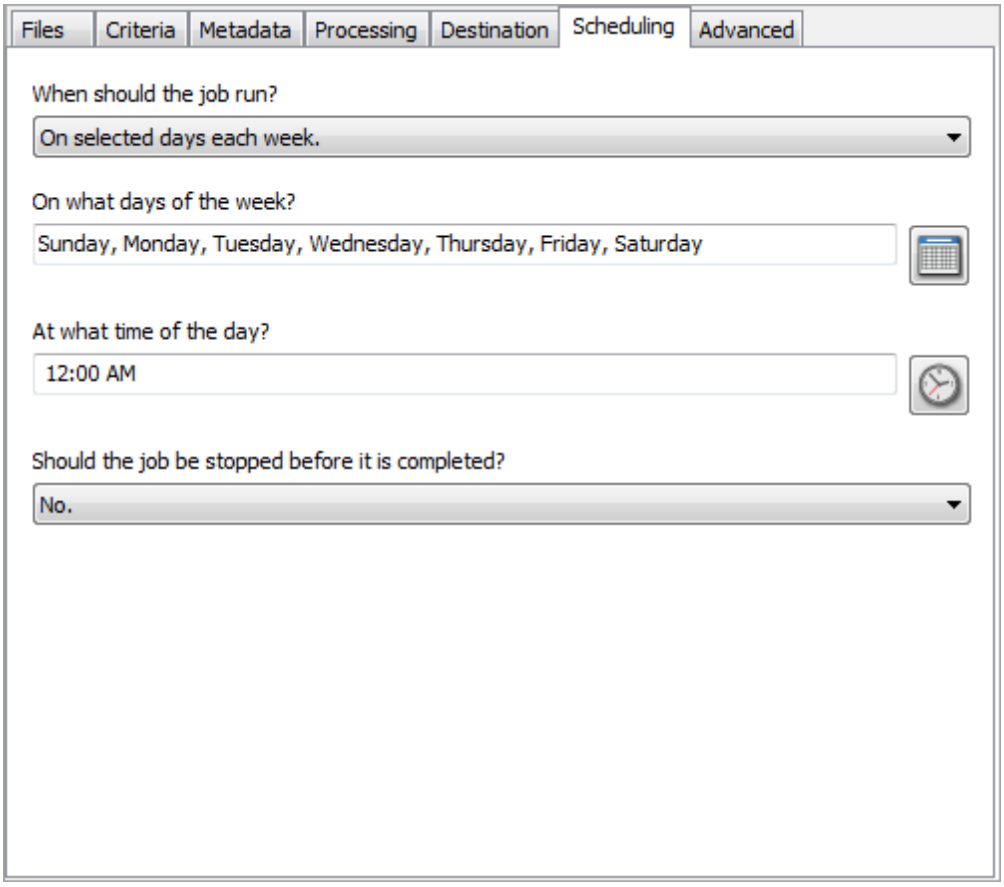
From the **When should the job run?** drop-down list, select one of the options to schedule a process. Each are described below.

- Option 1: On selected days each week
- Option 2: Repeatedly at a defined interval
- Option 3: On specific dates and times

On selected days each week

Use this option to schedule jobs to run on particular days at specific times. When this option is selected, the **Scheduling** tab displays as follows:



1. Next to the **On what days of the week?** text box, click the **Calendar** button to open the Days window. Set the days of the week to run the job.
2. Next to the **At what time of the day?** text box, click the **Clock** button to open the Time window. Set the time for the job to start running.
3. Determine if the job should be stopped before it completes. This option is useful if there is or could be a conflict with another process. If **Yes** is selected, the Duration window appears for you to specify the job duration time.

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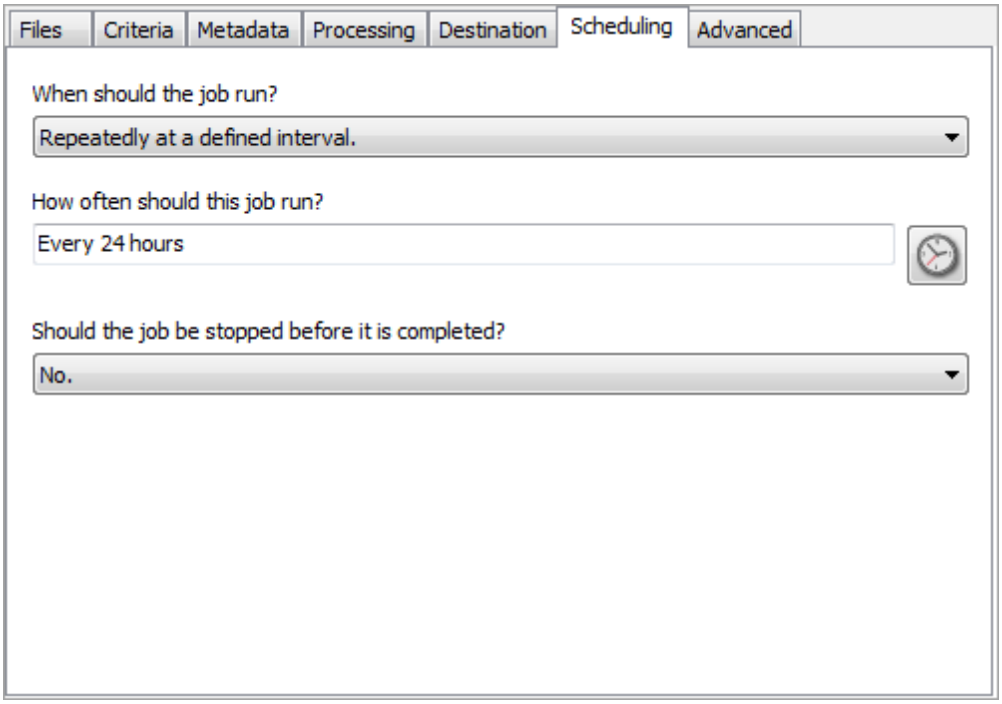
For more information about the Days, Time, and Duration windows see Job Scheduling.

Repeatedly at a defined interval

Use this option to schedule jobs to run repeatedly at a set interval, for as long as the policy is active. To stop a policy that has been set to run repeatedly, you must deactivate, change, or delete the policy. When this option is selected, the **Scheduling** tab displays as follows:



1. Next to the **How often should this job run?** text box, click the **Clock** button to open the Time Interval window. Set the interval time for the job to incrementally run by running.

2. Determine if the job should be stopped before it completes. This option is useful if there is or could be a conflict with another process. If **Yes** is selected, the Duration window appears for you to specify the job duration time.

On specific dates and times

Use this option to schedule jobs to run on specific dates and times. When this option is selected, the **Scheduling** tab displays as follows:

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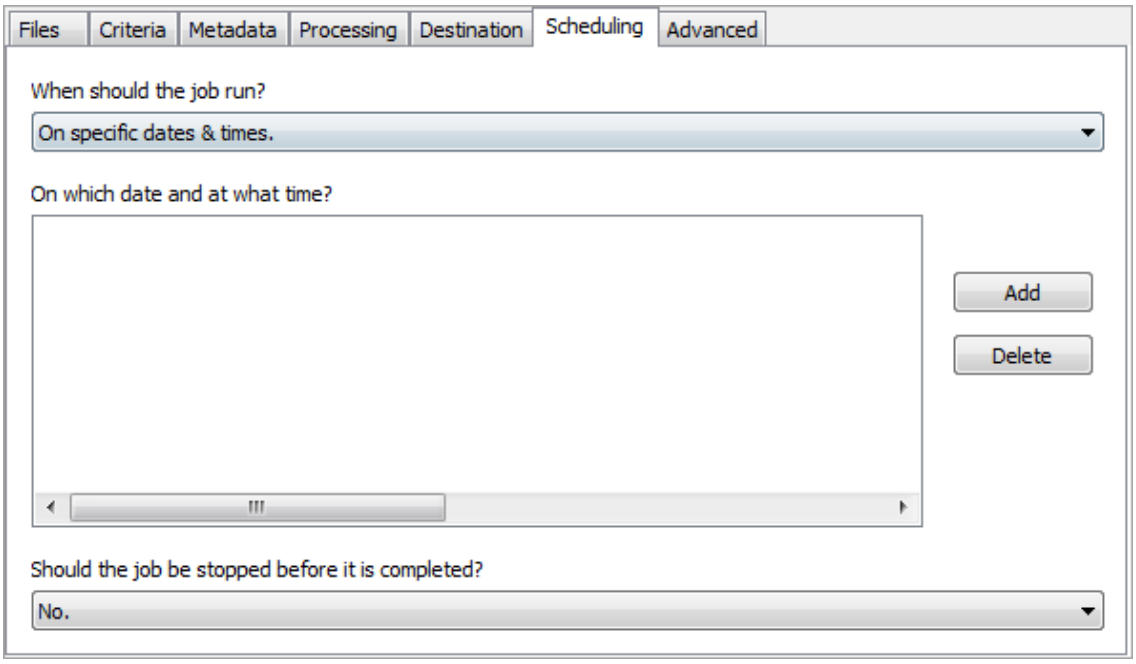

1. Click the **Add** button to add a scheduled runtime for the job. The Date window appears for you to select a date, and then the Time window appears for you to select a time.

2. To delete scheduled run dates and times, from the **On which date and at what time?** box, select a date and time entry and then click the **Delete** button to remove the setting.

3. To edit a date and time entry, delete the entry you want to change and then add a new run date and time.

4. Determine if the job should be stopped before it completes. This option is useful if there is or could be a conflict with another process. If **Yes** is selected, the Duration window appears for you to specify the job duration time.

Target and Process Policies Advanced Tab

Use the **Advanced** tab to define features for how the job or policy is to operate. Do this after you have designated a schedule using the **Schedule** tab.

The Target and Process application and the Target and Process Policies application share many of the same functions and options in the tabs that exist in both windows. Because of this, the Target and Process documentation refers to the Target and Process Policies documentation for individual tab descriptions.

On the **Advanced** tab, note a difference in the **Log and Report Options** group. Target and Process displays **Job History File Location** where Target and Process Policies displays **Report Options**. Furthermore, Target and Process Policies includes an additional option in the **Miscellaneous Options** group, **Retry missed files after**.

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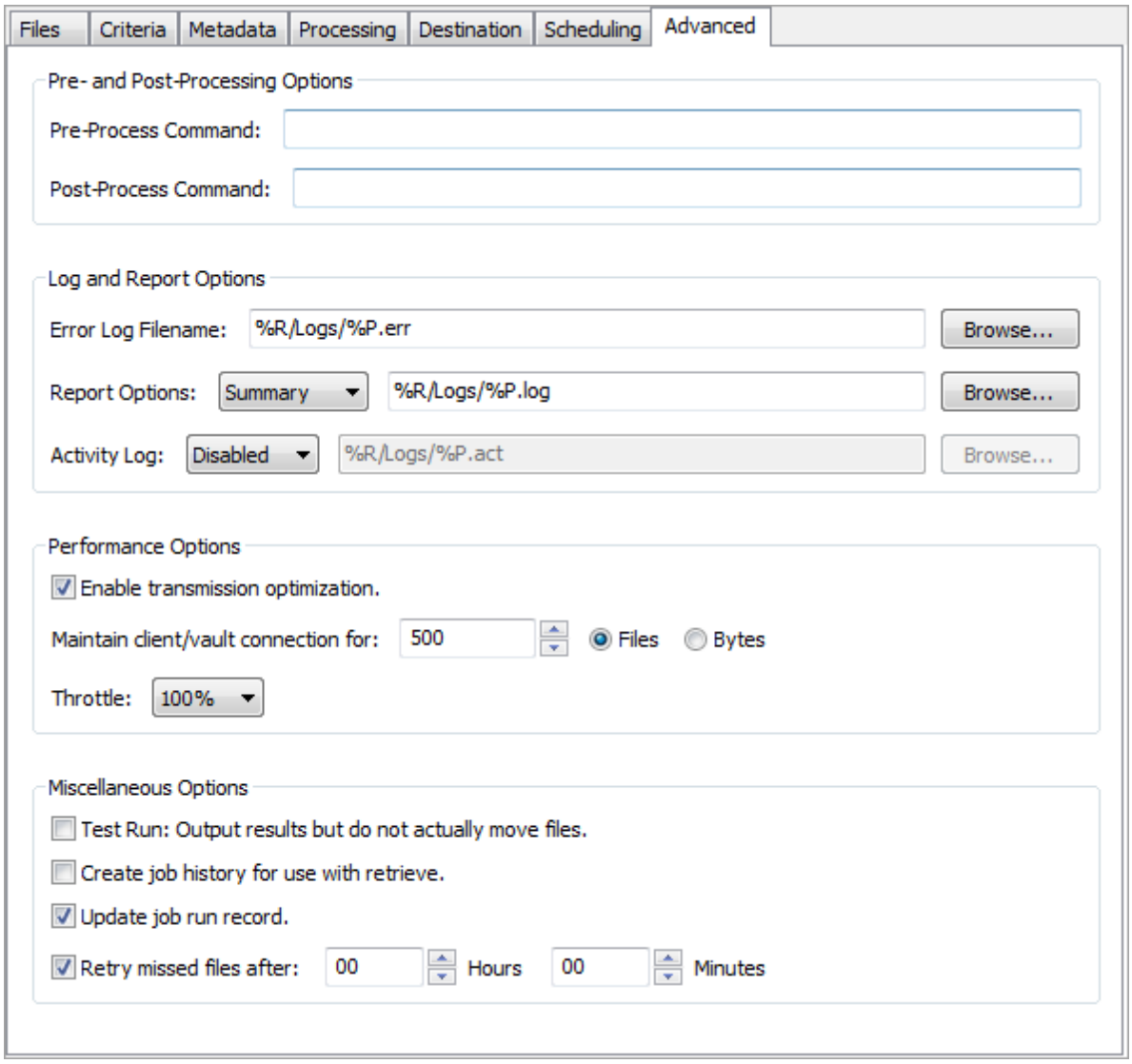

Target and Process Policies Advanced Tab Elements

Element	Description
Pre- & Post-Processing Command	Use the pre-processing and post-processing commands to execute commands before and after each session. Type a pre-processing or post-processing command, or both, into the text boxes. Command strings can be pointers to executable files with arguments, pointers to shell scripts, or a command string that the local processor is equipped to accept. The following are variables in pre-processing and post-processing commands:

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Element	Description
	%P or %Pn - Policy Name %H or %Hn - Host Name %D - Date (yyy:mm:dd) %Dy - Year %Dm - Month %Dd - Day %T - Time (hh:mm) %Th - Hour %Tm - Minute %Ts - Second %R or %Rn - Root path name. Valid only at the beginning of a string %Ne - Number of errors %Nr - Number of retries %Nb - Number of bytes written %Nf - Number for files written
Error Log Filename	An error log file is created anytime an error is encountered during a job. It is useful for troubleshooting problems. The **Error Log Filename** text box can include literal file names or a combination of file name field variables to generate file names for logs. • Leave the default variables in place, or type in a file name and extension to use, or type in a variable name using file name field variables (see **File Name Field Variables** section below). • Use the **Browse** button to define a new location and type in the file name that you want to use, including an extension.
Report Options **Target and Process Policies application only.**	**Report Options -** When a job runs, one of the following report files is created: **Summary** - A header and summary report **Complete** - Same as summary and lists all files

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Element	Description
Job History File Location **Target and Process application only.**	**Diagnostic** - Complete, but adds relevant, diagnostic information. • From the drop-down list select a report option. Use the **Summary** or **Complete** options on a normal basis and switch to **Diagnostics** if problems occur. • In the **Report Options** text box, leave the default variables in place, or type in the file name and extension to use, or type a variable name using file name field variables (see **File Name Field Variables** section below). • Use the **Browse** button to locate a file to overwrite an already existing log file. **Job History File Location -** A text box that contains the path where Phoenix DEM writes the job history and the job run record to use with Search and Retrieve. To create a job history and a job run record, select **Create job history for use with retrieve** below. Leave the default location of <install-dir>/JobHistory or type an alternate location. Or, click the **Browse** button to navigate to a different folder or create a new folder.
Activity Log	Activity logs provide logistical information about jobs. Refer to the logs after a job runs; they are stored in a specified location. • Set **Activity Log** to **Enabled**. The Activity Log text box becomes active. • In the **Activity Log** text box, leave the default variables in place; or, type in a file name to use, including an extension; or, type in a variable name using **Filename Field Variables** (see section below). • Opt to use the **Browse** button to define a new location and type in the file name.
Enable Transmission Optimization	Select for the client to constantly monitor its processes and to determine the best network transmission protocol for files being processed. Leave this option selected to get up to a 20% increase in performance. If the Information Repository is slow, run a few timed tests to determine a setting that works best for your Information Repository.

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Element	Description
Maintain Client/Vault Connection	Vault connection sharing determines how many files are sent from the source Vault to the destination Vault in a single connection. The higher the number of files or bytes transferred, the longer the connection between the source and destination Vault are maintained. Access to a particular Vault resource (such as one drive of a multi-drive storage device) used by a process on one client is restricted and inaccessible to other clients in the network for the duration of the connection. To illustrate this, image an environment where a single Vault with a single tape drive is used to service several desktop clients. When a client is configured with connection sharing set to 250 files, and other clients are configured to start jobs at the same time, no client can connect until the first client is finished. Each connection to the server locks out other connections, and other clients must wait before processing files. 1. Type a value into the **Maintain Client/Vault Connection for** text box. 2. Select the **Files** radio button or **Bytes** radio button. By selecting Files, a connection sharing proceeds based on the number of files transmitted; and if Bytes, based on the number of bytes.
Throttle	The throttle controls the speed that files are sent to the Vault. Lower numbers reduce the bandwidth. Throttle values range from 10% to 100% of total available bandwidth. • From the **Throttle** drop-down list, select a percentage to operate the client on its host computer for maximum performance. Phoenix DEM is designed to operate at maximum performance of its host computer, network environment, and storage resources available. During normal working hours, running a job at peak performance could interfere with other network operations.
Test Run: Output Results but do not actually move files	Use to test a job before doing it live. This is useful after creating a complex set of process parameters that include filters and other options. • Select **Test Run: Output results but do not actually move files**. When the process is scheduled to run, the files that match the criteria build, but files are not moved. Results output in a report, defined in the **Report Options** field.

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Element	Description
Create Job History for use with Retrieve	Job history logs contain information about the files included in jobs, and they are used for retrieving files. There are other methods to retrieve files that do not require job history logs. • To create a job history log when a job runs, select the **Create job log for use with retrieve** checkbox.
Update Job Run Record	This feature enables the creation of retry files and a Job Run Record (the job run record keeps track of full, incremental, differential, and level based jobs). This option is usually not selected during a manual job because manual jobs are conducted outside scheduled, recurring jobs that would be influenced by previous jobs. • To enable this feature, select the **Update job run record** checkbox. Use different names for interactive versus scheduled jobs. Updating the run record of an interactive job influences run records with the same name from policies.
Retry missed files after **Target and Process Policies application only.**	If the job fails because of problems with the client host computer, network issues, Vault hardware problems, or inaccessibility of a file, use the Retry option to retry ingesting files that were missed initially. • Select **Retry missed files after**, and then use the up and down control arrow to assign a retry time interval. If unable to process the files that were missed on the first pass, it logs the omission and the missed file information is added to the retry file.

File Name Field Variables

The file path can include a literal file name or a combination of variables to generate file names for reports. Use variables to distinguish between reports and to find specific reports.

If a path with a literal file name is typed like C:/Program Files/Logs/Job_Report.log, the system generates the report destination folder Logs (if it does not already exist) and a report named Job_Report.log. If a path with variables for the file name is typed, for example, %R/Logs/%P_from_%H_on_%D_at_%T, the system generates the report destination folder and a report - where policy name, host name, date, and time are populated with the actual details from your Information Repository and job.

The following are the variables to use. When using multiple variables, separate them from each other with an underscore (_).

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Variable	Description
%P or %Pn	Policy Name
%H or %Hn	Host Name
%D	Date (yyyy:mm:dd)
%Dy	Year
%Dm	Month
%Dd	Day
%T	Time (hh:mm)
%Th	Hour
%Tm	Minute
%Ts	Second
%R or %Rn	Root Pathname. Valid only at the beginning of a string

Target and Process User Preferences

User Preferences define default settings for the Target and Process, and Target and Process Policies windows. The information in User Preferences is the exact same as what is displayed on the Processing tab. The User Preferences entered become the defaults whenever you select **New Job** (Target & Process) or **Create a New Policy** (Target & Process Policies), but once you set defaults, changes made on the **Processing** tab override settings in User Preferences, but only for the given job or policy.

See Target and Process Policies Processing Tab for more information on these elements.

Preferences are an excellent way to streamline projects, providing a convenient way to set commonly used options for your desktop client. Each subsequent time you run a job using your desktop client those settings are automatically set.

Access the User Preferences from the Target and Process or Target and Process Policies **Tools** menu, select **User Preferences**.

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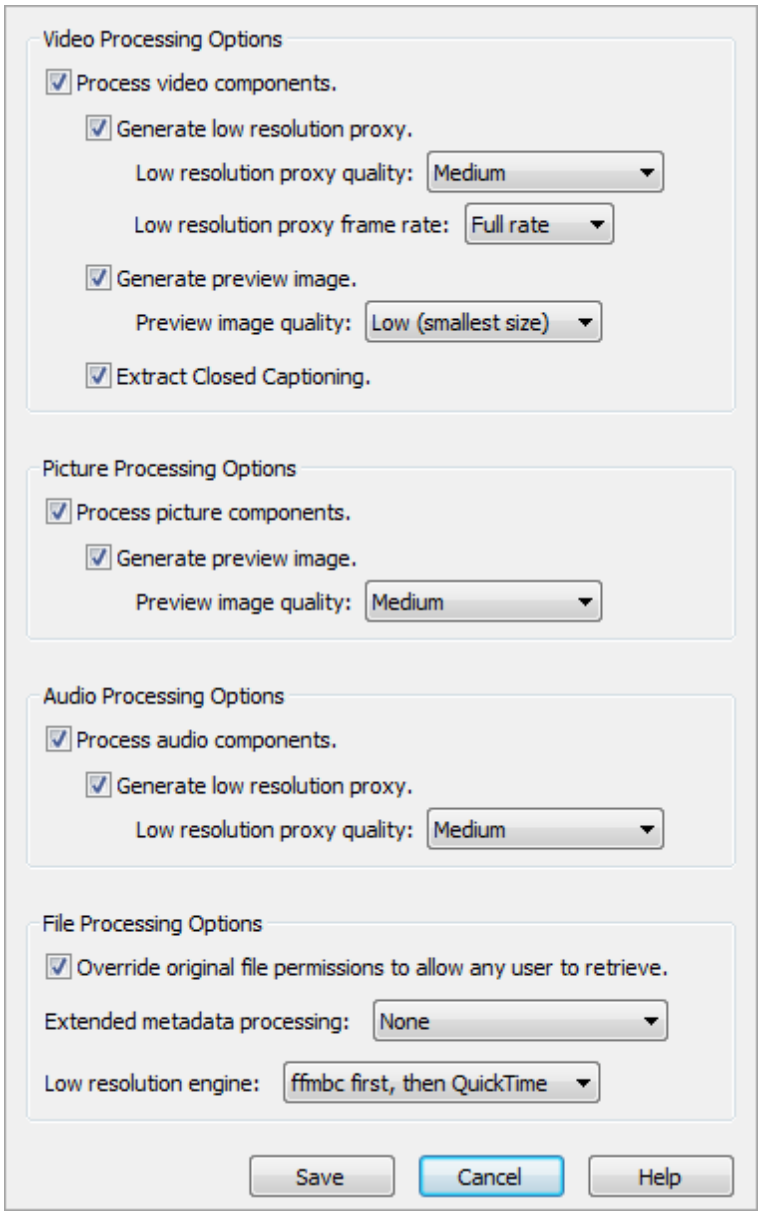

Target and Process, Target and Process Policies User Preference Elements

Video Processing Options

Select the **Process Video Components** checkbox to process video and for the associated options to enable. If not selected, video files ingest, but search applications cannot open and view them as video files and preview images are not generated.

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Elements	Description
Generate low resolution proxy	Select to generate low resolution companion files. From the **Low resolution proxy quality** drop-down list, select a resolution quality of **High**, **Medium**, or **Low**.
Generate preview image	Select to generate a preview image. From the **Preview image quality** drop-down list, select a image quality of **High**, **Medium**, or **Low**.
Extract Closed Captioning	Select to extract closed captioning text (if it exists), and to search against its contents. Closed captioning text may be extracted from mpeg-2 video files if it exists in the picture user data as defined in the EIA-708 standard. Alternatively, you can ingest a closed caption file, when ingesting the video file, instead of having it generated. The ingested file must have the name <filename>_cc.srt, where <filename> is the name of the video it corresponds to. Target and Process will not generate a closed caption file if you supply your own.

Picture Processing Options

Select the **Process Picture Components** checkbox to process picture files and for the associated options to enable. If not selected, picture files are ingested but the preview images are not generated and viewable in Phoenix DEM search applications.

Phoenix DEM is unable to generate preview images for picture files with file names that contain `, ", $, or \.

Elements	Description
Generate preview image	Select to generate preview images. From the **Preview image quality** drop-down list, select a image quality of **High**, **Medium**, or **Low**.

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Audio Processing Options

Select the **Process Audio Components** checkbox to process audio track files and for the associated options to enable. If not selected, audio track files are ingested but the audio tracks are not viewable in Phoenix DEM search applications.

Elements	Description
Generate low resolution proxy	Select to generate low resolution companion files. From the **Low resolution proxy quality** drop-down list, select a resolution quality of **High**, **Medium**, or **Low**.

File Processing Options

Use to set User Preferences for permissions, file processing, and metadata processing.

Elements	Description
Override original file permissions to allow any user to retrieve	Select to allow access on stored files so any user can retrieve files.
File Grouping Processing	Use this feature to group non-video files with video files so search results include all associated files. • Select from options: **None** - No file grouping. **Files in each folder together** - Groups files by folder so all of the files in any given ingested folder are in a single group. **All files together** - Groups all of the files in a job into one group, regardless of what folder they are in.
Extended Metadata Processing	Ingest.ExtMetadata and <filename>.md files have diverse purposes, select from options: **None** - No extended metadata processing. **Use Ingest.ExtMetadata** - Affects files in its own folder and child folders. If a child folder has its own Ingest. ExtMetadata, files in that folder and its child folders use it instead of a Ingest.ExtMetadata in a parent folder. **Use '.md' file** - Adds metadata only to files that have an identical filename and reside in the same folder.

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Elements	Description
	Use script - Adds metadata based on a user-provided script file located in the Config folder in the Phoenix installation directory.

Search and Retrieve

Use Search and Retrieve to find and retrieve files from the Information Repository. Recall that SoleraTec's Phoenix DEM allows you to replicate and migrate stored files many times over. With Search and Retrieve, you can specify search criteria to locate stored files regardless of how many times they have been replicated or migrated.

Every file ingested by Target and Process or Target and Process Policies is assigned a unique lookup handle. This lookup handle and other relevant metadata are stored in a database on each Vault that houses the files. Because of this, Search and Retrieve never needs to track the movement of files and requires no information about previous jobs to find files quickly. Files can be located and copied to any computer on the network, even if the given computer did not contain the files originally.

As files are ingested to a Vault, metadata is sent to the database on the Vault. All rights, access control lists, and other security criteria are stored with files. When stored files are migrated or replicated to other Vaults, the metadata is also moved or replicated to the databases on those Vaults.

Whenever files are requested for retrieval, Search and Retrieve queries Vaults for copies of the files. Each Vault quickly scans its database to determine if it has the requested files. When Vaults that contain the requested files respond, Search and Retrieve determines from which Vault it can retrieve the files most quickly (based on the system, media speed, and availability), even if media is offline.

- Files with a ".lnk" suffix are links to other files in the Information Repository and cannot be retrieved.

If you are looking for video files that were ingested with Process Video Components enabled, use the Digital Evidence Manager.

Workflow - Search and Retrieve

Search and Retrieve is a simple tool to search for files in storage and then to bring the files out of storage.

1. From your suite of product applications, open the Search and Retrieve application (SrchRtrv.exe). For further explanation of how to start using different operating systems, see Getting Started.
2. Conduct an Information Repository search or a Job History search for files, by selecting the **Search** button. The search functionality supports Wildcards and special characters. See Wildcards.
3. From the items found from the search, determine which files to retrieve and set any retrieval options.
4. Select the **Start** button to retrieve the selected files. Opt to watch retrieval progress by selecting the **View Retrieval Progress** tab.

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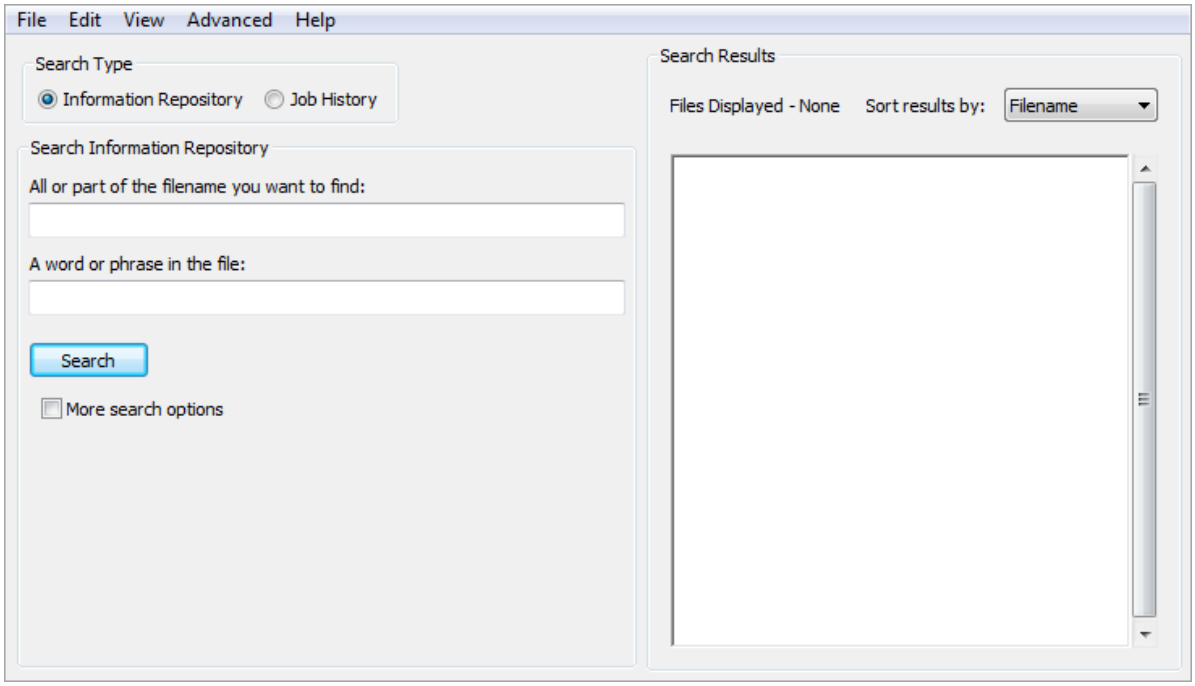
5. Once retrieval process is done, your files are located at the designated location.

For detailed directions for retrieving multiple files, changing retrieval parameters, or exporting to Rimage, see Export Files.

After file retrieval, if you want to send your files back to a Vault for storage, then you'll have to run a policy using Target and Process.

Search and Retrieve Window

The Search and Retrieve window is divided into two main panes. The left pane is the area to define search types and options for files. The right pane displays the retrieval options and search results.



Search and Retrieve Menu Items

Menu Items	Description
File > Start	Launch to retrieve and restore selected files. If no files are selected, a notification dialog box appears to warn you.
File > Test Run	Perform a "pre-flight" retrieval of the selected items and show media information (media name and current online/ offline status) for all of the needed media. A test run will show basic retrieval information that can be reviewed before a retrieval process is started.

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Menu Items	Description
File > Save Search Results As	From the **Save Search Results** Window, **Save results from** - Choose to save only selected files or all files. **Saved file format** - Select **Simple text**, **Tab delimited fields**, or **XML**. The **Select fields to save** section is only available when **Tab delimited fields** is selected as the file format. **Save as** - Click the **Browse** button to choose a location. **Save** your selections.
File > Exit	Close the application. If changes have been made, a Confirmation dialog box appears for saving changes. Click **Yes**, **No**, or **Cancel**.
Edit > Clear File Selections	Select to remove any marked files for selection.
View > Mode	The display mode for the Search and Retrieve window. Select either List mode or Tree mode. See Export Files. **List mode** - View files as a list. **Tree mode** - View files in a tree structure. Retrieve option tabs also appear in the right pane of the Search and Retrieve window.
View > Enable Tool Tips	Check mark by this menu item indicates that tool tips for the window display. The tips are brief descriptions of window controls if the mouse pointer is moved over a control. De-select to turn tool tips off.
View > Enable File Tips	Check mark by this menu item indicates that file tips for the window display. A file tip is a file's name, and it appears if the mouse pointer is moved over a file name that is not fully visible while using **Tree** mode. Not applicable for **List** mode. De-select to turn file tips off.

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Menu Items	Description
Advanced > Transmission Optimization	Enable the client to constantly monitor its processes and select the network transmission protocol that best suits the files being processed. To get up to a 20% increase in performance, leave the option selected. However, depending on your particular network configuration, you may find that you can get better performance by de-selecting this option. If your Information Repository seems to be slower than you would expect, run a few timed tests to see which setting works best. • Select option **Enabled** to turn this feature on, or **Disabled** to turn it off.
Advanced > Retrieval Priority	Determine how many files are processed in a single session. • Select between: **Low** - Hold the connection for 30 seconds. **Medium** - Hold the connection for 5 minutes. **High** - Hold the connection for 10 minutes. With the connection held, Search and Retrieve brings back as many files as it can in the amount of time selected. No other processes can access the Vault's drive during the connection.
Advanced > Rimage Export Configuration	Export files in Rimage format to a Rimage device. Rimage writes the files out to disc. For more information see Rimage Export Configuration.
Advanced > Manually Group Files	When Phoenix DEM ingests files, it automatically groups them, assigning each file a group number. When enabled, you can create new groupings by assigning a new group number to files already in the Information Repository and found using Search and Retrieve. • To enable this feature, the appropriate registry settings must be enabled. • This feature works only with Information Repository searches and when files are selected. This is a powerful feature for advanced users. If you use this feature, you cannot undo the new groupings unless you use this feature again.

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Menu Items	Description
	1. Search the Information Repository for the files to group or regroup. 2. Select the files to group. 3. Select **Advanced** menu > **Manually Group Files**. 4. To group the selected files, click **Yes**. Otherwise, click **No** to cancel.
Advanced > Automatically Group Files	When Phoenix DEM ingests files, it automatically groups them, assigning each file a group number. When enabled, you can "smartly" regroup files into multiple groups based on naming and other metadata information. • To enable this feature, the appropriate registry settings must be enabled. • This feature works only with Information Repository searches and when files are selected. This is a powerful feature for advanced users. If you use this feature, you cannot undo the new groupings unless you use this feature again. 1. Search the Information Repository for the files to group or regroup. 2. Select the files to group. 3. Select **Advanced** menu > **Automatically Group Files**. 4. To group the selected files, click **Yes**. Otherwise, click **No** to cancel.
Advanced > Edit Metadata	Open the Edit Metadata window to add and edit metadata for files that have already been ingested. • This option is active only when the appropriate metadata extensions block is implemented. See Metadata Extensions Block Structure. • To enable this feature, the appropriate registry settings must be enabled. • This feature works only with Information Repository searches and when files are selected.

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Menu Items	Description
	This is a powerful feature for advanced users. Once you edit metadata, you cannot undo your changes unless you use this feature again. 1. Search the Information Repository for the files that have metadata you want to change. 2. Select **Advanced** menu > **Edit Metadata**. 3. The Edit Metadata window opens. The fields in the window are defined by metadata extensions. 4. Change the values as needed and then click **OK**.
Advanced > Set Protection	Open the Set File Protection window to add, delete, and manage Rights for files that have already been ingested. • To enable this feature, the appropriate registry settings must be enabled. • This feature works only with Information Repository searches and when files are selected. This is a powerful feature for advanced users. Once you set protection, you cannot undo the changes unless you use this feature again. 1. Search the Information Repository for the files that have Rights you want to change. 2. Select **Advanced** menu > **Set Protection**. 3. The Set File Protection window opens. 4. Change the Rights as need and then click **OK**.
Advanced > Purge Files	Permanently delete all instances of the selected files from the entire Information Repository. • To enable this feature, the appropriate registry settings must be enabled. • This feature works only with Information Repository searches and when files are selected. This is a powerful feature for advanced users. Once you purge files, it is permanent and cannot be undone.

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Menu Items	Description
	1. Search the Information Repository for the files that you want to purge. 2. Select **Advanced** menu > **Purge Files**. 3. The **Confirm Purge Files** window opens. 4. To purge all selected files and any copies across the entire Information Repository, click **Yes**. Otherwise, click **No** to cancel.
Advanced > Search for Deleted Files	Check mark by this menu item indicates that deleted files will be included in the search results. These are files that are marked for deletion.
Help > Current Page	Open online help to the Search and Retrieve webpage.
Help > Search and Retrieve Overview	Open online help with focus on Search and Retrieve.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open the support webpage.
Help > About Search and Retrieve	Open the About Search and Retrieve window.

Edit Metadata Window

The Edit Metadata window is available in Search and Retrieve. Use it to edit metadata on ingested files. It is enabled only after you have selected files from search results.

1. From the main menu of Search and Retrieve, select **Advanced** > **Edit Metadata**.
2. Change the values as needed.
3. Click **OK**.

The following are examples of the Edit metadata window. The first image displays with available field types that you need to customize, while the second image displays realistic fields. Your metadata values will appear in your window.

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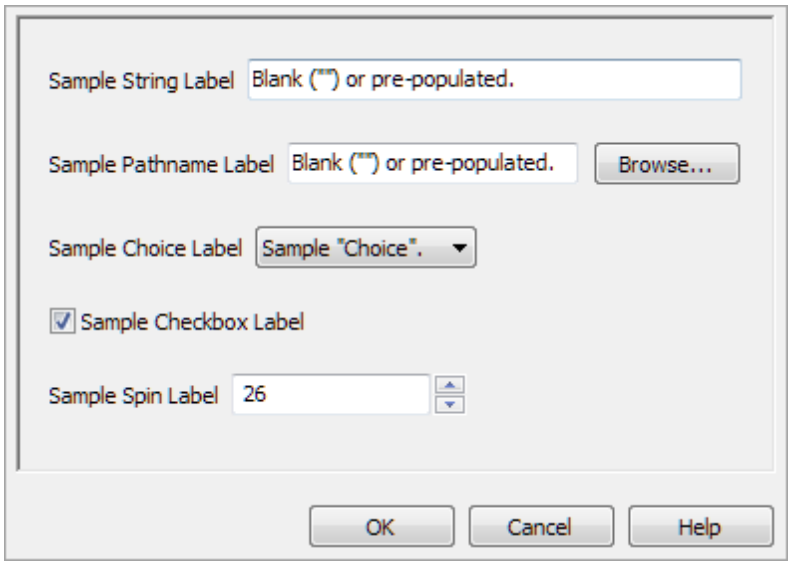

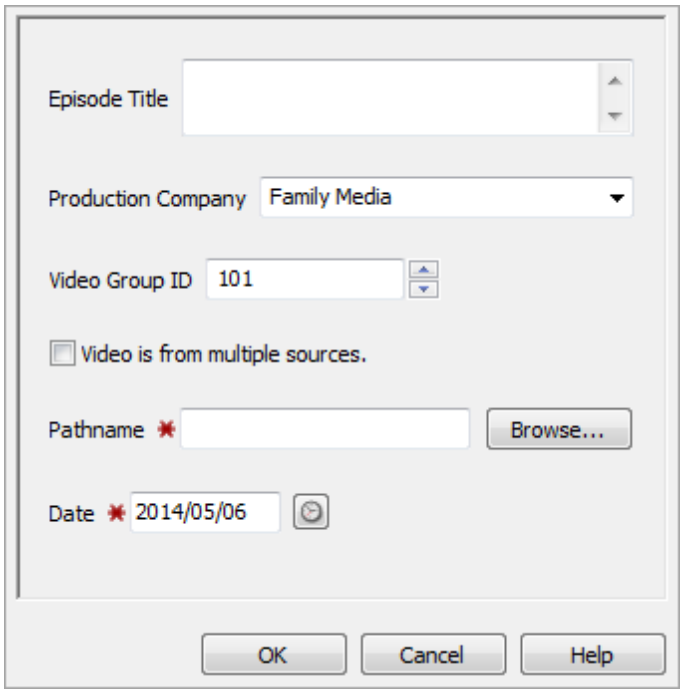

The fields on this window are defined by the ModMdExt block. For more information see Metadata Extension Block Structure.

Set File Protection Window

The Set File Protection window is available in Search and Retrieve. Use it to edit and set protection on ingested files. It is enabled only after you have selected files from search results.

1. From the main menu of Search and Retrieve, select **Advanced** > **Set Protection**.
2. Use the **Add**, **Delete**, and arrow buttons to change the Rights as needed.

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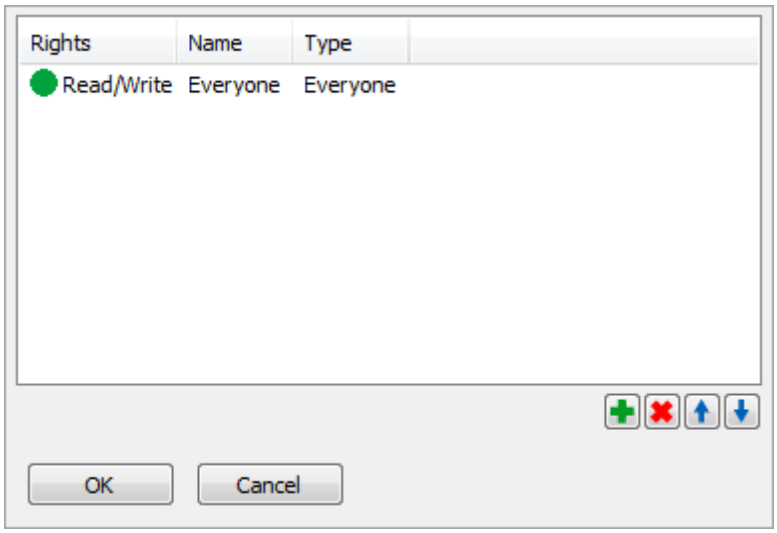
3. Click **OK**.

The following is an example of the Set File Protection window. The current Rights for your files will appear in the window.



Rimage Export Configuration

To export to Rimage, do the following:

1. Ensure that required Rimage system folders are in place and system permissions are set correctly.
2. Enable Rimage export using the Rimage Export Configuration window (below). Once enabled, **Rimage** activates in the form of an export destination option.

The changes you make here will be replicated in the Video Content Manager.

How Search & Retrieve Interacts with Rimage

As illustrated in the diagram below, when a Search and Retrieve job is executed, Search and Retrieve sends data to the Export folder on the local system and an Order file to the Network Publisher Order Files folder on the Rimage computer. Rimage takes care of the rest. In the diagram, the label file resides on the Rimage computer, but it can easily reside on any networked computer that Rimage has access and security permissions to.

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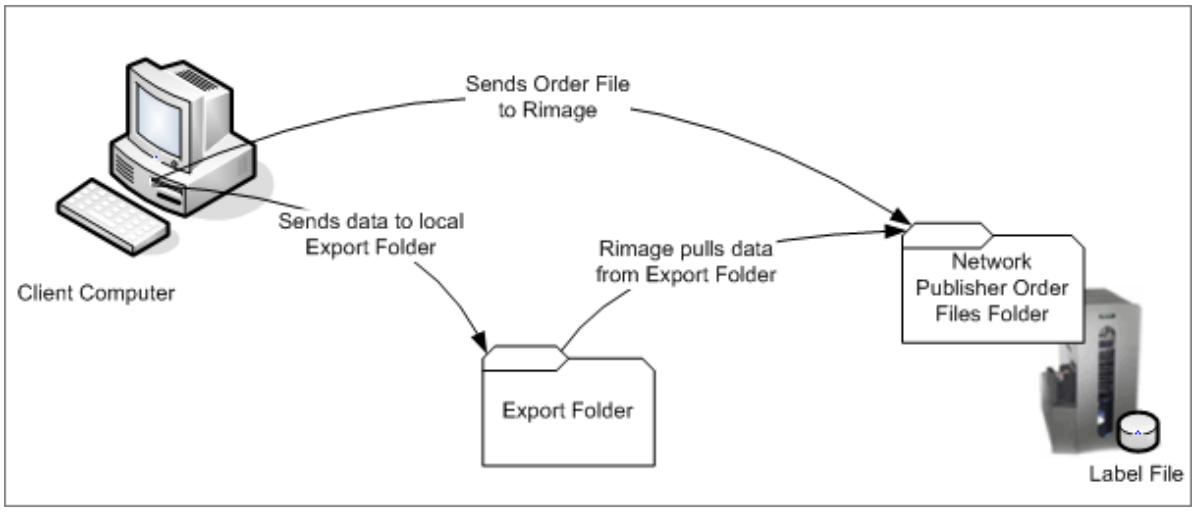

Folder Access and Permissions Settings

To enable Rimage Export functionality, the Rimage Network Publisher must be installed and running on the network, and the Rimage Orders folder must be visible from the computer where Search and Retrieve is running. Check the following:

- There is a Rimage export folder on the Search and Retrieve client desktop computer.
- Search and Retrieve users have write access to the export folder and Rimage has at least read permissions.
- Security is set for domain users to have full control.

Rimage Export Configuration Window

Configure Search and Retrieve for Rimage export using the Rimage Export Configuration window. This process enables you to export or save files to a Rimage system.

Access the Rimage Export Configuration window from the Search and Retrieve **Advanced** menu.

1. To enable export to Rimage, from the Search and Retrieve **Advanced** menu, select **Rimage Export Configuration**.

   You must enable export to Rimage. If you do not enable it, Rimage does not activate as an option on the **Set Retrieval Options** tab in the **Where do you want to write the retrieved files** box.

2. Select the **Enable Rimage Export** checkbox. This enables the rest of the boxes in the window.

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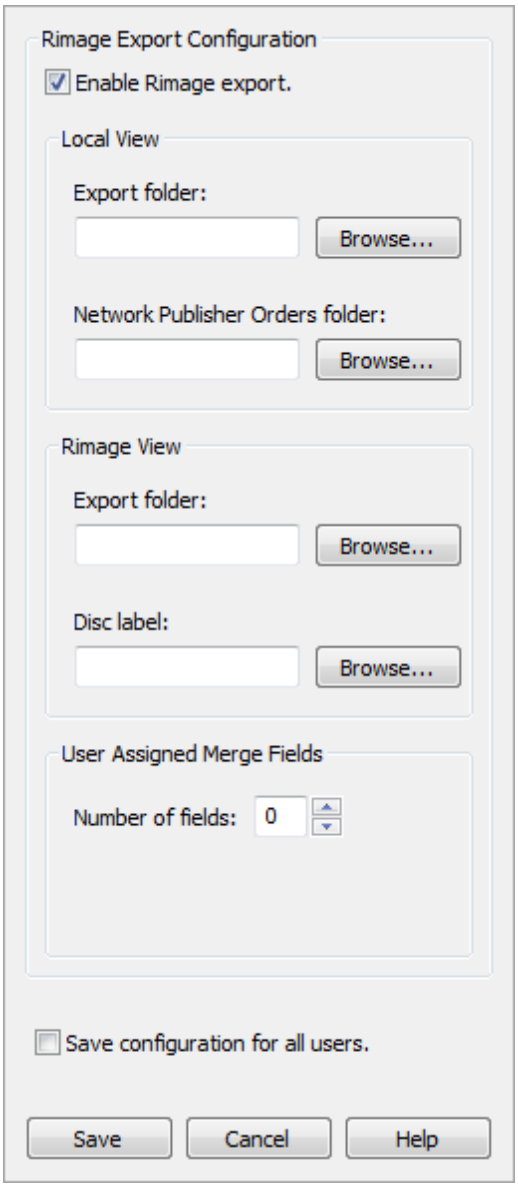

3. Type values for the boxes listed below:

Element	Description
Local View: Export folder	The view of the export folder on the Phoenix DEM client computer from the client computer. The client computer refers to the computer where Search and Retrieve is running. • Type a path for a folder or click the **Browse** button to navigate to a folder.

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Element	Description
Local View: Network Publisher Orders folder	The Network Publisher Orders folder is on the Rimage computer. This is the Phoenix DEM client computer's view of the export folder on the Rimage computer. The client computer refers to the computer where Search and Retrieve is running. • Type a path for a folder or click the **Browse** button to navigate to a folder.
Rimage View: Export folder	The view of the export folder on the Phoenix DEM client computer from the Rimage computer. This is the export folder on the client computer where Search and Retrieve is running. • Type a path for a folder or click the **Browse** button to navigate to a folder. The path indicates how this folder is viewed by the Rimage system.
Rimage View: disc label	The client computer's view, where Search and Retrieve is running, of the path where Rimage gets the label file for the discs to be burned. For Phoenix DEM to interact with the disc label that Rimage uses when creating discs, the disc label must already be created.
User Assigned Merge fields: Number of fields	The number of user defined fields (0 - 30). Use these fields to add label merge text to the label that is used for your media. Every field defined here is added to the Retrieval Options tab. You can define the contents of each field on the Set Retrieval Options tab. Ensure that the fields entered match the fields on the disc label that Rimage uses. If the fields do not match, disc labels do not print correctly.
Save configuration for all users	Select to keep the same values for all logged in users who use Search and Retrieve on the current computer.

Search for Files

The process for retrieving files is quite simple, but there are a few things of which to be aware. Just like other Phoenix DEM applications, the search for files can be very focused or it can be more general. Search options can be set to refine the search process to a broad or narrow set of files.

As files are being sought for retrieval, the files matching the search criteria are compared to the security parameters associated with the files in the Vaults. You cannot retrieve files that you did not have access to in primary hard disk storage.

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- **Number of Items Found** - The sum of items found includes file folders selected during ingest and the files themselves. For example, if six folders containing a total of 30 files were selected, then the result returns with, 36 Items Found.

- **Stopping the Search** - If you stop a search before it is finished by clicking the **Stop** button, the search is not completed; risking that some files may not have been found.. When you stop a search or when a search completes, a window appears displaying the total number of items found.

During an Information Repository search, log search, or the building of directory trees, the application may appear to be unresponsive. Be patient, when the application completes its given task, it will respond normally. Access and security issues could come up if the host computer is running a different operating system from the computer where the files are being written.

Select a Search Type

The first thing to do in preparation for searching for files in Search and Retrieve is to select a search type to perform from the search types and options (left) pane of the Search and Retrieve window:

- **Information Repository** - Employs its search engine to look through all of the Vaults in the Information Repository (or all of the Vaults limited in the search using More search options). With the search engine you can find all of the files in all of your Vaults that match the search criteria. Information Repository searches are much slower than Job History searches, depending on how much stored data is managed in your Vaults. This search also features additional parameters that can be used to broaden or narrow your search further. See Information Repository Search.

- **Job History** - A very specific search based on job log files, requiring you to know the exact job that contains the files you want to retrieve. See Job History Search.

Wildcards for File or Content Searching

Similar to other Phoenix DEM search applications, Search and Retrieve's file search supports the use of single and multiple wildcards. The wildcards for file searching are different from the wildcards used for content searching.

Wildcards are supported when searching for files and directories in the Search and Retrieve left pane, **All or part of the filename you want to find** text box, or when searching for a particular word or phrase using **A word or phrase in the file** text box.

- **Search tape media either online or offline** - The Search and Retrieve results include files that have been migrated from the tape media that is being searched, even when tape media is offline.

- **Case Sensitive** - Directory and file name searching is case sensitive in Search and Retrieve unless you select the **Ignore case of filenames** checkbox. This is unlike file and directory filters in Target and Process, Target and Process Policies, and Data Service Policies.

For more information see Wildcards for file searching and content searching.

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Information Repository Search

From the Search and Retrieve window, when you select the **Search Type** - **Information Repository**, options for searching your Information Repository appear in the left pane.

The Information Repository search type locates all of the files that fit the search criteria you enter. The search is an "and" search, meaning that the more search parameters you specify, the smaller and more targeted the list of search results becomes. For example, clicking the **Search** button without specifying any search criteria, all of the items in the Information Repository are listed. In another search, specify a word in the file, and the search results show only files that contain the word specified.

For a list of extended search options, select the **More Search Options** checkbox to display all search options available (displayed in the image below).

- After filling in your search options, click the **Search** button to initiate the file search. While processing, the **Search** button is replaced by a **Stop** button. Click the **Stop** button to abort the search.

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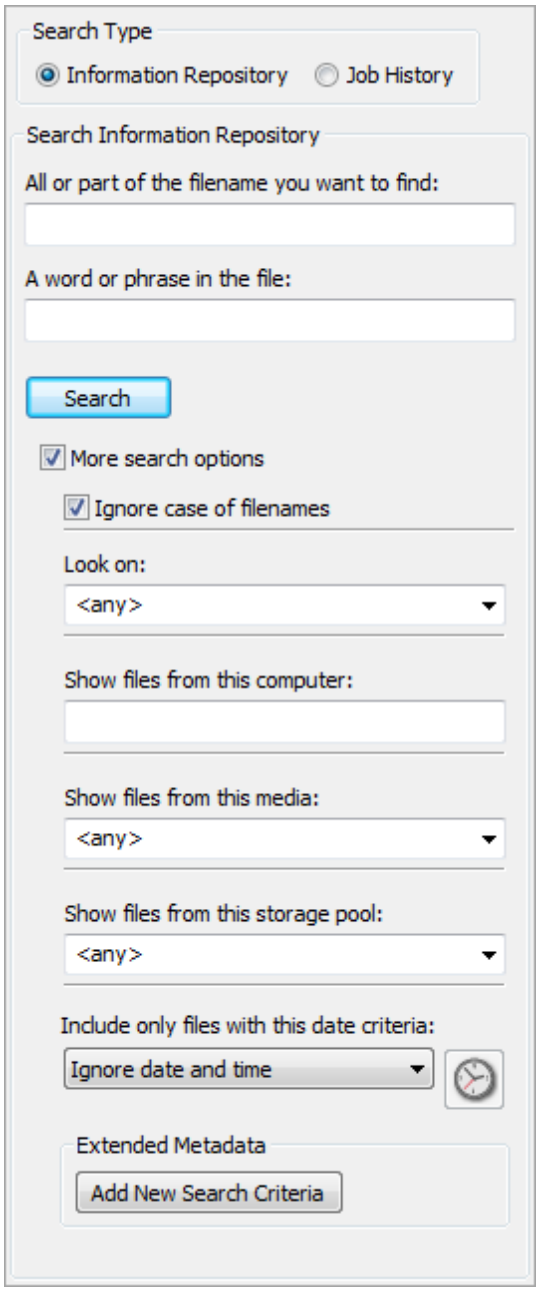
Search Type
Information Repository
Job History
Search Information Repository
All or part of the filename you want to find:
A word or phrase in the file:
Search
More search options
Ignore case of filenames
Look on:
<any>
Show files from this computer:
Show files from this media:
<any>
Show files from this storage pool:
<any>
Include only files with this date criteria:
Ignore date and time
Extended Metadata
Add New Search Criteria

Search Options - Information Repository Elements

Element	Description
All or part of the filename you want to find	Type the name or part of the name of the file you want to find, or enter a wildcard. For more information see Wildcards for file searching and content searching.

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Element	Description
A word or phrase in the file	Type a word, phrase, or wildcard that you are looking for in the Information Repository. To find a particular phrase, be sure to enclose it in quotation marks. Otherwise, the search returns all of the files containing any word that you enter. Regardless of quotes, the search is not case sensitive. See above links for more information on searching with wildcards.
Search	Click to begin the file search. While processing, the **Search** button is replaced by a **Stop** button. Click the **Stop** button to abort the search. When the search is complete a Retrieve dialog box appears displaying the number of search hits.
More search options	Select checkbox to expand the list of search options for searching in the Information Repository.
Ignore case of filenames	This control determines if the search is to pay attention to the case of the files that you are searching for. • To turn case sensitivity off, click the **Ignore case of filenames** checkbox.
Look on	The network search feature is defaulted to search on all Vaults to locate your files. • Use the drop-down list to select the Vault to search.
Show files from this computer	Limit the search to only files originating on a specific host computer. • Type the name of the computer of choice into this text box.
Show files from this media	Increase the speed of the search by limiting the search to a particular unit of media. • From the drop-down list, select a unit of media.
Show files from this storage pool	If the files you require are located in a specific storage pool, type the name of the storage pool into the text box or use the drop-down list to select the storage pool.
Include only files with this date criteria	If you know the approximate time that your files were either stored last or modified, you can narrow the focus of your search based on date and time.

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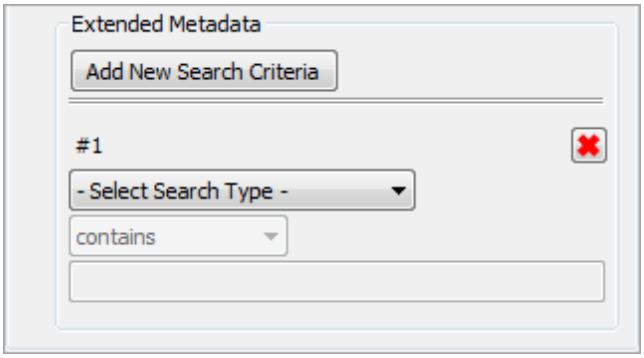
Element	Description
	1. Use the drop-down list to select the time frame that best suits your needs. 2. Click the **Clock** button to assign date and time to the search criteria. 3. Click **OK** to close the Date and Time window. The Date and Time window consists of the combined controls of the Date window and Time window.
Extended Metadata	With **Add New Search Criteria** clicked, new search parameters appear.  Click the **Add New Search Criteria** button repeatedly to open as many fields as needed. A number appears at the top of each box to distinguish one field from another. Use the **Select Search Type** drop-down list to select the type of metadata. Default search criteria types are: • **Any Metadata Field -** Matches against any metadata field. • **Project Name -** Enter all or part of the project name. • **Clip Name -** Enter all or part of the clip name. Use the second drop-down list to select **contains**, **does not contain**, **is equal to**, or **is not equal to**. You can extend the search criteria based on the Query blocks defined in your MetadataExtensions.cfg file.

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Element	Description
	If the metadata ingested contains special characters interpreted as wildcards (?, *, #, !, ~, ^, &, [ ], { }, \, "), then when searching for metadata use the escape character (\). For example, if 16*37 was ingested as metadata, to search for this expression, you would search using 16*37. • Use the **Delete** button to remove the field from the application.

If you add media or storage pools while Search and Retrieve is open, it does not see the new media or storage pools until it is closed and restarted.

Job History Search

From the Search and Retrieve window, when you select the **Search Type** - **Job History**, the options for searching through job log files appear in the left pane. Log files that were created for every Target and Process job are displayed in the **Select Jobs** group. To make this type of search effective, it is best to know the name of the job that contains the files you are looking for.

1. From the **Select Jobs** group, select a job log file first. The options below the **Select Jobs** group perform their searches towards the selected job log file.
2. After selecting search options, click the **Search** button to initiate the file search. While processing, the **Search** button is replaced by a **Stop** button. Click the **Stop** button to abort the search.
3. Click **File** > **Save Search Results As** to save a .txt file that contains a listing of all found data and its metadata. The data is sorted according to the parameter set in the **List** view, **Sort results by**. You can use this file to peruse search results.

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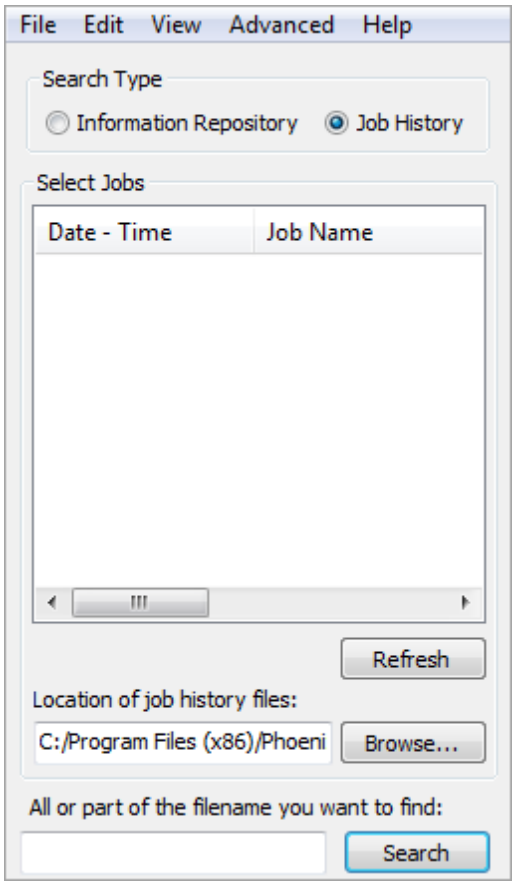

Search Options - Job History Elements

Element	Description
Select Jobs	List of available job history log files created by generated Target and Process jobs. The group includes Date-Time, Job Name, and Job Type column headers to sort by and you can select single or multiple logs. Select a job history file, and it appears in the **Location of job history files** text box. If the job history files do not appear in the **Select Jobs** group, click the **Refresh** button to re-display files.
Location of job history files	If you have saved your job history logs to a non-default path, type the path in the **Location of job history files** text box; or click the **Browse** button for the Browse for Folder window, to navigate to the path.

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Element	Description
All or part of the filename you want to find	Type the name or part of the name of the file you want to find within the job log file, or enter a wildcard. For more information see Wildcards for file searching and content searching.
Search	Click to begin the file search. While processing, the **Search** button is replaced by a **Stop** button. Click the **Stop** button to abort the search. When the search is complete a Retrieve dialog box appears displaying the number of search hits. The number of items found includes directories and files, so it may be different from the number of files listed under **Files Displayed** in the **Search Results** group.

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Export Files

After Search and Retrieve finishes searching for files, the results display in the application's right pane. The retrieval options and search results can be displayed in one of two ways:

- **List mode** - Provides an Internet-like view and interaction. Use **List** mode if you want to export a single file or several files immediately, or for a one time save to a specific location. This is the default setting.
- **Tree mode** - Provides a file tree-like view and interaction. Use **Tree** mode if you want to set more complex export parameters, including: exporting multiple files or folders, defining new security settings for the retrieved data, exporting at a later time, and exporting to a location other than where the file originated.

Change the mode through the **View** menu > select **Mode**, and then select **List** or **Tree**.

Whichever mode you select, each mode displays the items found from the search and further action is required by you to determine which files to actually retrieve and export.

List Mode

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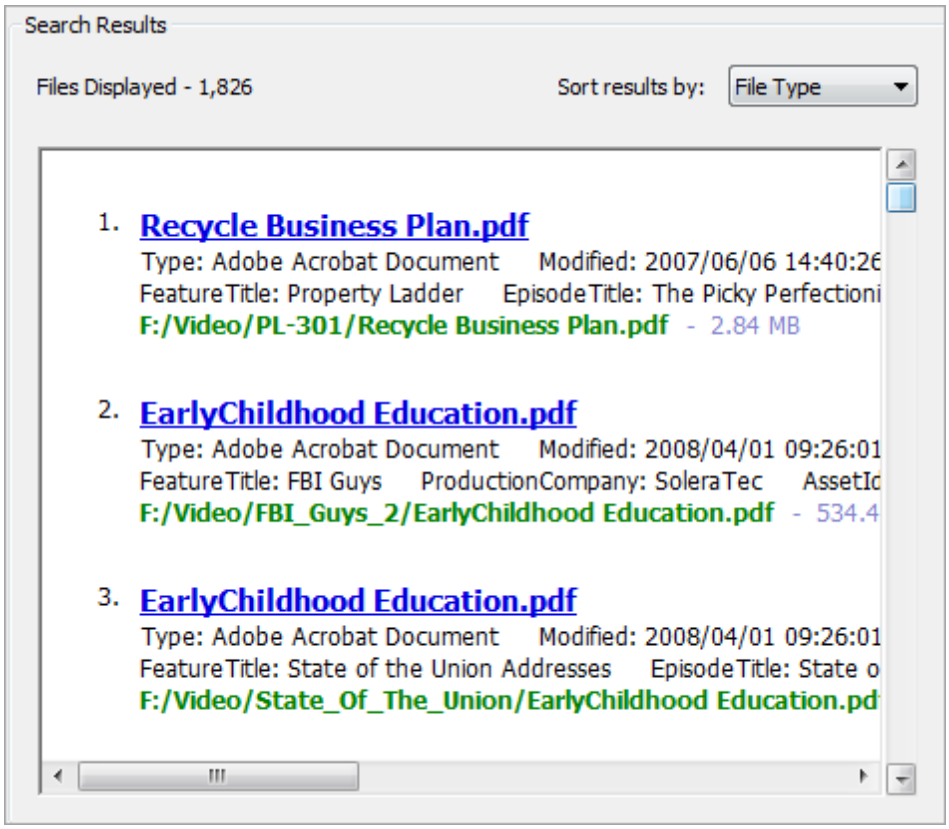
Search Results
Files Displayed - 1,826
Sort results by:
File Type
1. Recycle Business Plan.pdf
Type: Adobe Acrobat Document Modified: 2007/06/06 14:40:26
FeatureTitle: Property Ladder EpisodeTitle: The Picky Perfectioni
F:/Video/PL-301/Recycle Business Plan.pdf - 2.84 MB
2. EarlyChildhood Education.pdf
Type: Adobe Acrobat Document Modified: 2008/04/01 09:26:01
FeatureTitle: FBI Guys ProductionCompany: SoleraTec AssetIc
F:/Video/FBI_Guys_2/EarlyChildhood Education.pdf - 534.4
3. EarlyChildhood Education.pdf
Type: Adobe Acrobat Document Modified: 2008/04/01 09:26:01
FeatureTitle: State of the Union Addresses EpisodeTitle: State o
F:/Video/State_Of_The_Union/EarlyChildhood Education.pd

- In **List** mode, sort results by selecting an option from the **Sort results by** drop-down list. Available selections are: **Filename**, **Pathname**, **Time Modified**, **File Type**, **Size**, **Host**, and **Owner**.
- Use the scroll bar to rotate the list up or down to find the file that you want to retrieve.
- Move the mouse pointer over the file name to select it (it loads into a local desktop application), or right-click for a shortcut menu with options: View a Copy, Save a Copy as, and Show in Tree.
- To view a copy of a file, right-click the underlined file name, and select **View a Copy** from the shortcut menu.

Retrieve a File (Save a Copy of a File)

Follow these steps to retrieve a file:

1. Set the Transmission Optimization and Retrieve Priority parameters.
2. Right-click the underlined file name that you want to retrieve. Or, navigate to the file using keyboard functionality and press the SPACE BAR to select it.

Only files are retrievable.

3. A shortcut menu appears with available options. Click **Save a Copy as** to save a copy of the file.

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4. From the Save a Copy as window, select a location to save the file, and then click **Save**.

Problems Retrieving Files?

To ensure that data is not overwritten on networked computers, Phoenix DEM is set by default to not overwrite existing files. If a retrieval job is unsuccessful, indicated by zero files retrieved, the failure is most likely due to an unexpected condition, such as Search and Retrieve encountering a copy of the files already on the destination computer. Most error conditions can be fixed by setting additional retrieval parameters. For example, to overwrite files on a networked computer set options to **Always overwrite files**, **Overwrite file if the stored file is newer than existing file**, or **Never overwrite files**.

1. Ensure files to overwrite are not write protected by the operating system on your networked computer.
2. Return to the Set Retrieval Options tab.
3. Select **When do you want to overwrite files on the destination computer**.
4. Select **Always overwrite files on the destination computer**.
5. Click **Start** to retry the retrieval job.

View File in Tree Mode

Tree mode is useful to see where a file was located in the file system before it was ingested. Or to see where it is located in a shadow Vault.

1. Right-click the underlined file name.
2. A shortcut menu appears with available options. Click **Show in Tree**. The Tree mode (below) replaces the **Search Results** group view from the current **List** mode.

Tree Mode

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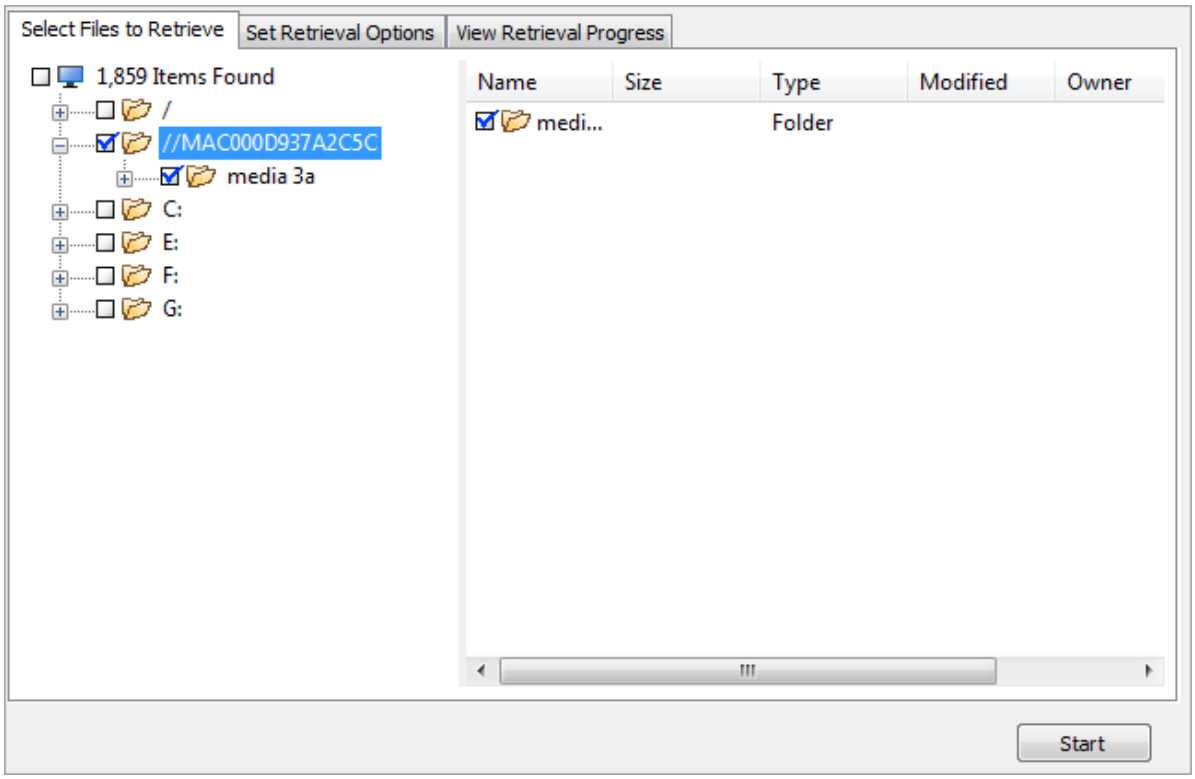

The Tree mode includes three tabs for handling search results and retrieval options. For more information about each tab, click the links below:

- Select Files to Retrieve
- Set Retrieval Options
- View Retrieval Progress

Select Files to Retrieve

The **Select Files to Retrieve** tab displays all of the files that Search and Retrieve has found that match your search parameters. All eligible files matching the search criteria, including original data paths, are presented in a file tree format in the center portion of the window. Any folders currently engaged in other Phoenix DEM jobs are grayed out.

Open the file tree, and then select the folders and files that you want to retrieve. You can select single or multiple files. See also Target and Process Policies Files Tab for more information on how to select files.

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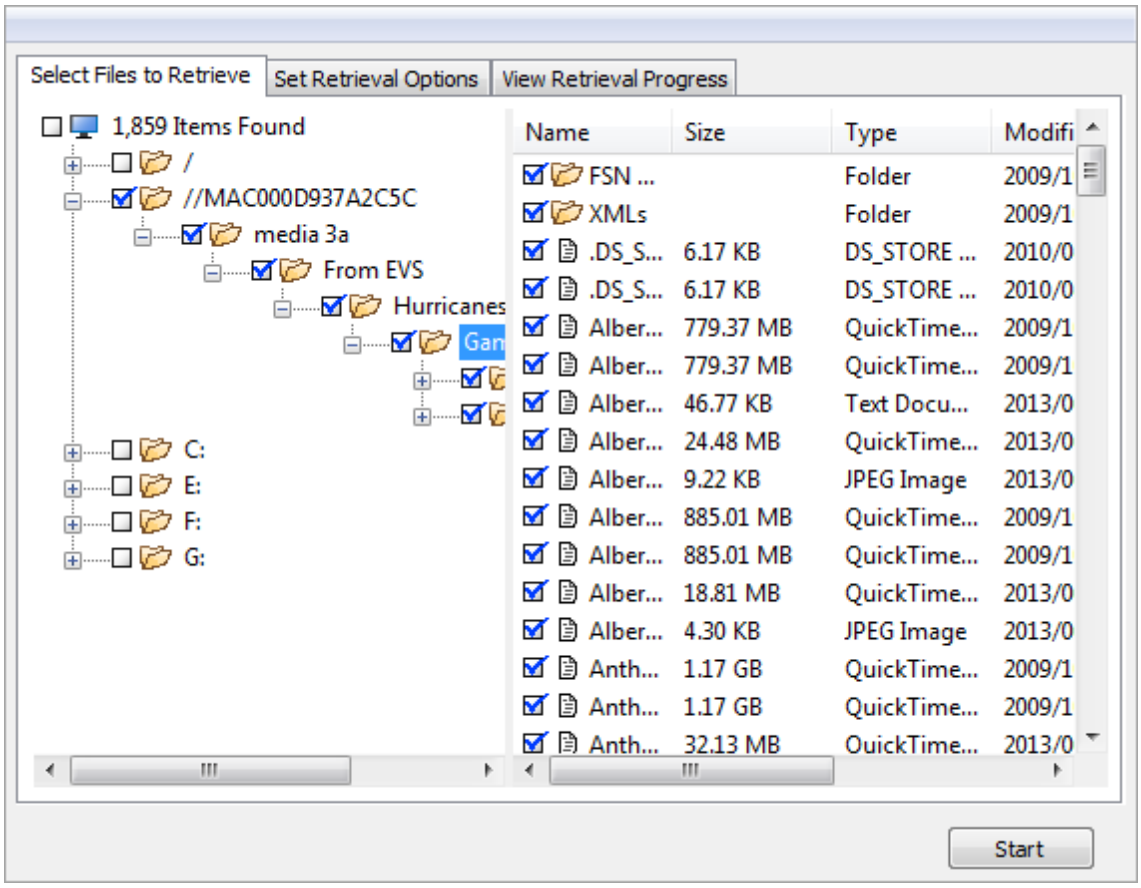

The bottom of the window displays information about the files you have selected, including total number of files and folders, size of all files selected, and the amount of disk space required for retrieved files and metadata.

Set Retrieval Options

Use the **Set Retrieval Options** tab to modify the Search and Retrieve retrieval process to your needs. Depending on your system, the following options on how to export the retrieved files may or may not be available for you to select. The contents of the tab is dynamic depending on the selection chosen. Work your way through the tab parameters.

Export to Local File System

To set the retrieval parameters for exporting to a local file system, populate the options when **Local File System** is selected. The options range from setting a scheduled time to execute the retrieval job to assigning a different location to retrieve the files.

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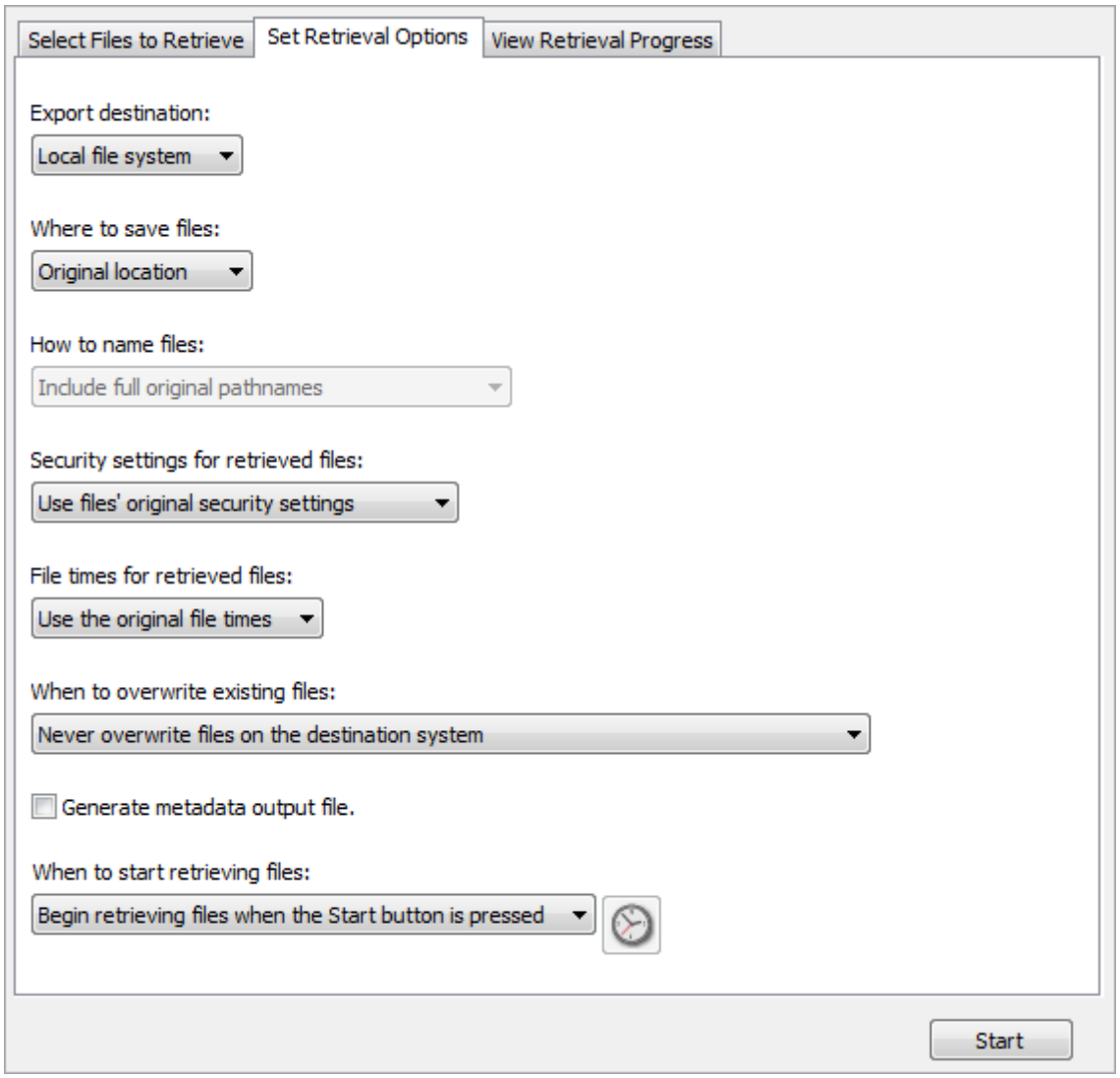
Select Files to Retrieve
Set Retrieval Options
View Retrieval Progress
Export destination:
Local file system
Where to save files:
Original location
How to name files:
Include full original pathnames
Security settings for retrieved files:
Use files' original security settings
File times for retrieved files:
Use the original file times
When to overwrite existing files:
Never overwrite files on the destination system
Generate metadata output file.
When to start retrieving files:
Begin retrieving files when the Start button is pressed
Start

Element	Description
Export destination	Define where files are exported to. (Local File System.) Additional custom options appear when an ExportExtensions.cfg file is in place.
Where to save files	Send the retrieved data back to its original location or to any other location on the network. **Original location** - Send retrieved data to its original location.

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Element	Description
	Different location - Send retrieved data to another location. Use the Browse For Folder window to select the location, and click **OK**.
How to name files **Active only for Different Location and Export to Rimage.**	Define how selected data is arranged when retrieved. There are three options: **Include full original pathnames** - This option recreates the source file structure. The retrieved data file structure matches that of the source file. For example, if the source is "C:\Accounting\Marketing\...", then the retrieved data is "C:\Accounting\Marketing\...". **Include pathnames starting at selected items** - This option creates only the directory structure of the items selected on the **Select Files to Retrieve** tab. For example, if the source is "C:\Accounting\Marketing\..." and "Marketing" is selected, then the retrieved data includes only "Marketing" and the files beneath it. If the selected "Marketing" folder contains a folder called 2008Q3, then 2008Q3 appears in the retrieved data at the same file level as "Marketing", not beneath it. Finally, if only files are selected, the retrieved data is comprised of only files. **Include filenames only** - This option ignores file folders, and the retrieved data is comprised of only files. **Include filenames only** does not work correctly if selected files have identical names. When working with identical names, use **Include full original pathnames** or **Include pathnames starting at selected items**.
Security settings for retrieved files	Assign the original security settings or the current user's security settings to the retrieved files.
File times for retrieved files	Assign the original file time or the retrieval time (current time) to the retrieved files.
When to overwrite existing files	Select an option outlining when to overwrite files. If the files retrieved already reside in some form on the target computer, there is a conflict and the retrieve job does not work.

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Element	Description
Generate metadata output file	Generate metadata xml files for output. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**. • **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. • **Create multiple files** - The metadata file has the same name as its associated video file, but with the .xml extension. One metadata file per video file is created and they stick together. At a minimum the data included contains the pathname, file id, size, and the date and time modified.
When to start retrieving files	The Information Repository defaults to an immediate retrieval setting. • To delay the job to a later time, select the correct option from the drop-down list and then click the clock button to set the retrieval time. The Date and Time windows appear combined.

Export to Rimage

To set the retrieval parameters for exporting to Rimage, populate the options when **Rimage** is selected.

Export to Rimage works only if your Rimage system and Search and Retrieve Rimage export are configured properly. See Rimage Export Configuration.

When exporting to the Rimage, do not stop Search and Retrieve until all jobs have finished. If you do, temporary files are not removed, and those files will have to be removed manually. To manually remove temporary files, go to the Rimage Export Folder, and remove <user name>_<uuid>.

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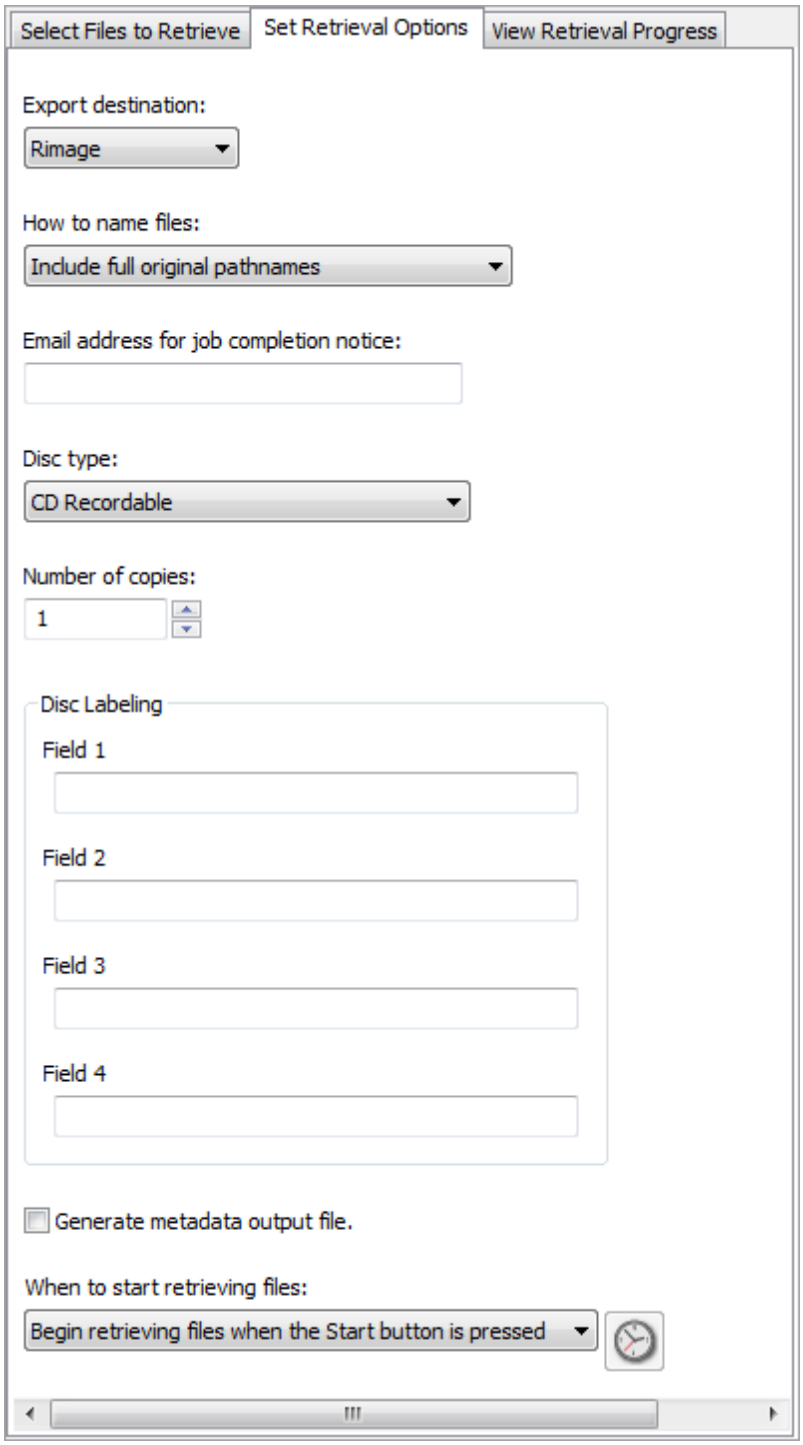

Element	Description
Export destination	Define where files are exported to. (Rimage.)

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Element	Description
How to name files **Active only for Different Location and Export to Rimage.**	Define how selected data is arranged when retrieved. There are three options: **Include full original pathnames** - This option recreates the source file structure. The retrieved data file structure matches that of the source file. For example, if the source is "C:\Accounting\Marketing\...", then the retrieved data is "C\Accounting\Marketing\...". **Include pathnames starting at selected items** - This option creates only the directory structure of the items selected on the **Select Files to Retrieve** tab. For example, if the source is "C:\Accounting\Marketing\..." and "Marketing" is selected, then the retrieved data includes only "Marketing" and the files beneath it. If the selected "Marketing" folder contains a folder called 2008Q3, then 2008Q3 appears in the retrieved data at the same file level as "Marketing", not beneath it. Finally, if only files are selected, the retrieved data is comprised of only files. **Include filenames only** - This option ignores file folders, and the retrieved data is comprised of only files. **Include filenames only** do not work correctly if selected files have identical names. When working with identical names, use **Include full original pathnames** or **Include pathnames starting at selected items**.
E-mail address for job completion notice	Type a valid e-mail address to define where Rimage sends an e-mail when the Rimage job is finished.
Disc type	Define the type of media for Rimage to make.
Number of copies	Define how many copies of the data for Rimage to make.
Disc labeling	Define the information on media labels for the media that Rimage is producing. The number and titles of the fields available depend on what is entered in the Rimage Export Configuration window. If a field is not present, add it using the Rimage Export Configuration window.
Generate metadata files	Generate metadata xml files for output along with video file. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**.

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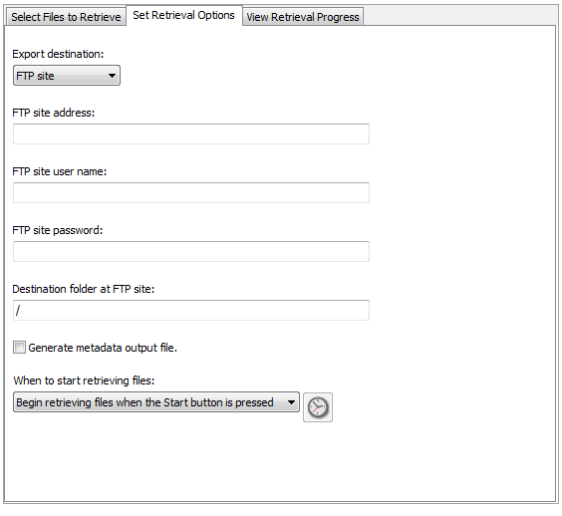
Element	Description
	• **Create multiple files** - The metadata file has the same name as its associated video file, but with the .xml extension. One metadata file per video file is created and they stick together. • **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. At a minimum the data included contain pathname, file id, size, and the date and time modified.
When to start retrieving files	The Information Repository defaults to an immediate retrieval setting. • To delay the job to a later time, select the correct option from the drop-down list and then click the clock button to set the retrieval time. The Date and Time windows appear combined.

Export to FTP Site

To set the retrieval parameters for exporting to FTP Site, populate the options when **FTP Site** is selected. The options range from setting a scheduled time to execute the retrieval job to assigning a different location to retrieve the files.



Element	Description
Export destination	Define where files are exported to. (FTP Site.)

Element	Description
FTP site address	Type the address of the FTP location.
FTP site user name	Type the user name to log into the FTP site. This is required.
FTP site password	Type the FTP site password to log into the FTP site. This is required.
Destination folder at FTP site	The location of the directory to store files. Type the destination path and directory to export files to.
Generate metadata output file	Generate metadata xml files for output along with video file. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**. • **Create multiple files** - The metadata file has the same name as its associated video file, but with the .xml extension. One metadata file per video file is created and they stick together. • **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. At a minimum the data included contain pathname, file id, size, and the date and time modified.
When to start retrieving files	The Information Repository defaults to an immediate retrieval setting. • To delay the job to a later time, select the correct option from the drop-down list and then click the clock button to set the retrieval time. The Date and Time windows appear combined.

Customized Export Options

Parameters for using Customized Export Options are only enabled when an ExportExtensions.cfg file is in place. The options on this tab are defined by your Phoenix DEM administrator and appear when a custom option is available and selected. Consult your Phoenix DEM administrator for details.

Available options are customizable via ExportExtensions.cfg at <install-dir>\Program Files\Phoenix\Config.

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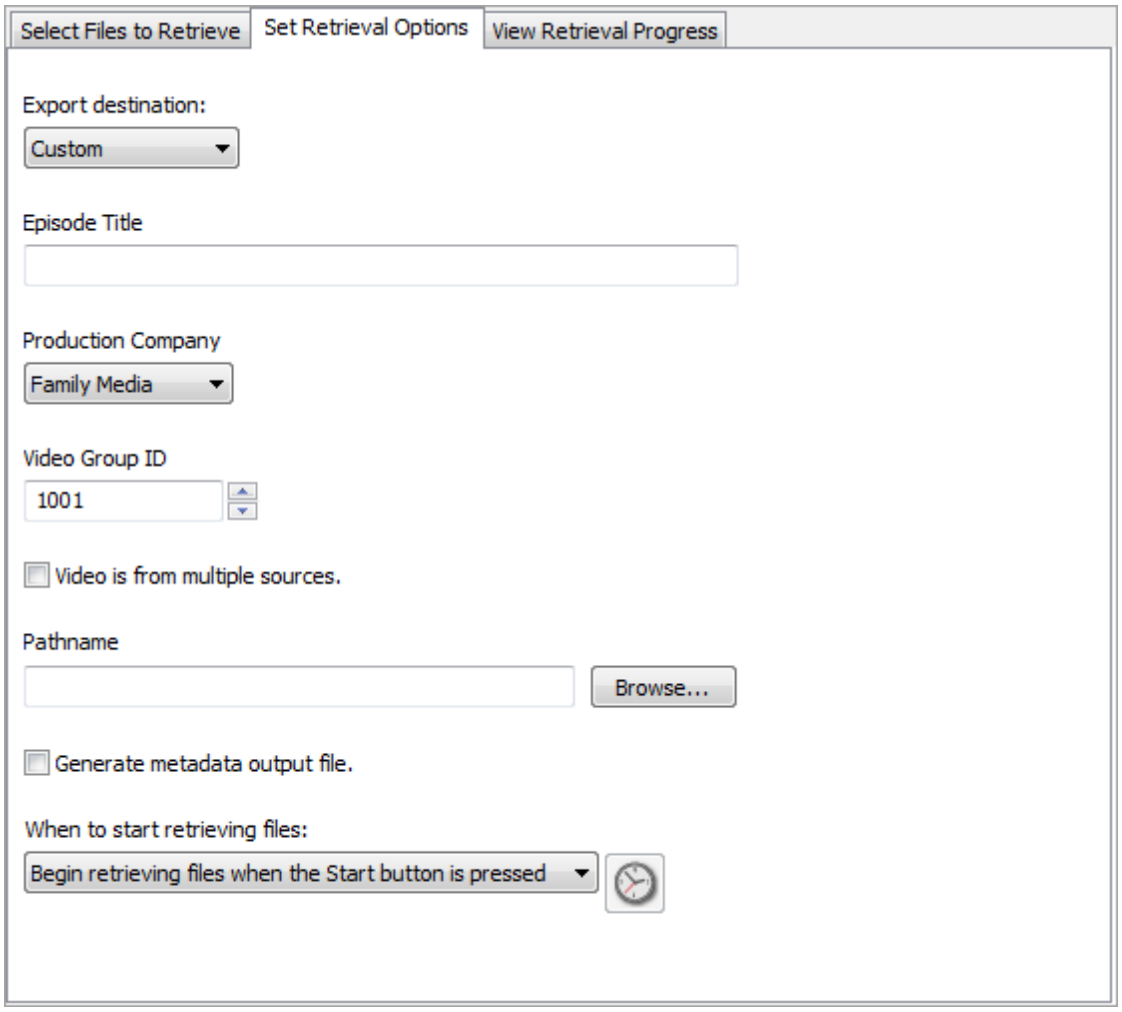

Element	Description
Export destination	Define where files are exported to. (Custom option.)
Argument <1 - 8>	These fields are defined in ExportExtensions.cfg by your Phoenix DEM administrator. Consult your Phoenix DEM administrator for details. Blank fields are ignored.
When to start retrieving files	The Information Repository defaults to an immediate retrieval setting.

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Element	Description
	• To delay the job to a later time, select the correct option from the drop-down list and then click the clock button to set the retrieval time. The Date and Time windows appear combined.

After setting the parameters, click **Start** to initiate a retrieval job. The job begins based on the retrieval parameters set, the View Retrieval Progress window appears, and **Start** is replaced by **Stop** until the retrieval job is completed. Search and Retrieve retrieves the file from its stored location and writes it to the target location specified.

If you opted to delay the retrieval job, the View Retrieval Progress window appears with a note indicating when the job will start. **Start** is grayed out, but when the job starts, it is replaced by **Stop**.

Pay attention to Information Repository warnings while retrieving files. If Search and Retrieve runs out of storage space while attempting to write retrieved files, the job fails. When the retrieval job is finished, **View History** is activated. Click **View History** to see details about the job and any problems that were encountered.

If a selected file cannot be retrieved, the file name is added to a list, and Search and Retrieve tries a second time to retrieve the file before the retrieval job finishes.

If **Stop** is clicked while retrieving files, then not all of the files are retrieved, and files that have already been completely retrieved remain on the target computer.

If you are experiencing issues with getting files, see Problems Retrieving Files.

View Retrieval Progress

To view retrieval progress you must be in the Tree view. In **Tree** mode, click the **View Retrieval Progress** tab to see job activity. If there were errors in the job, an error log is published to the current working directory.

To save retrieval job results:

1. Click **View History** to see a view of the full job history.
2. Click **Save**. The **Save Output File As** window appears.
3. Select an output location, enter a filename, and then click **Save**.

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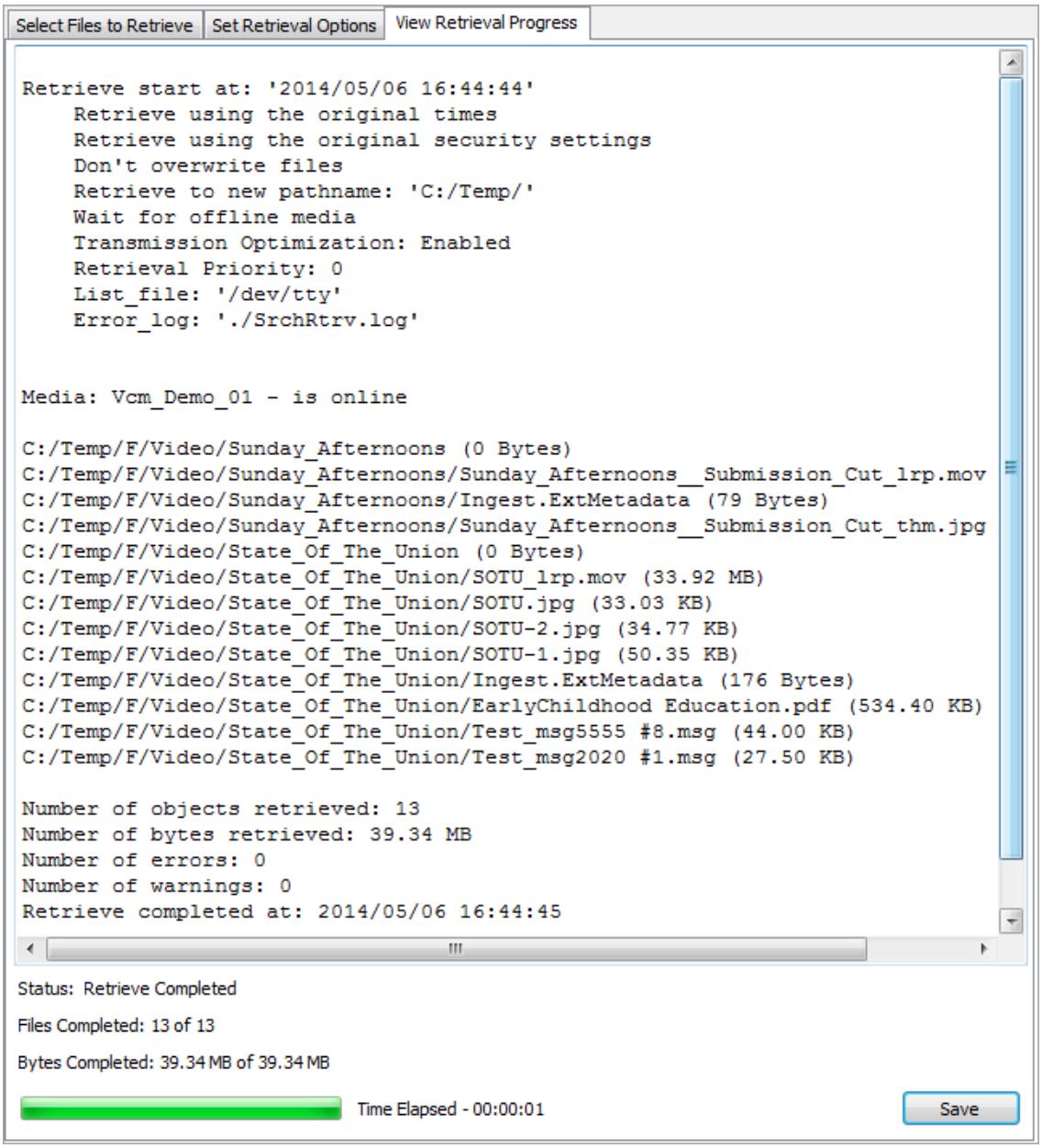

Export Files - View Retrieval Progress

Most of the display for the View Retrieval Progress tab is text showing the progression of the retrieval job. The following describes other window elements.

Element	Description
Status	The status of the job. The status can be either **Restoring files** or **Retrieve completed**.

Element	Description
Files Completed	Displayed as <###> of <###>, to show the number of files retrieved out of the total number of files.
Bytes Completed	Displayed as <###><KB/MB/GB> of <###><KB/MB/GB>, to show the number of bytes retrieved out of the total number of files.
Time Elapsed	Displayed as <hh:mm:ss>, to show process time of the job.
View History	This button is inactive until the job is complete. Click to display the history of the job.
Save	This button is activated after **View History** is selected. Define an output location for the file using the **Save Output File as** dialog box.

Digital Evidence Manager

The Digital Evidence Manager (DEM) is SoleraTec's Phoenix DEM search application to find stored, digital evidence on a Vault and then export it.

The Digital Evidence Manager addresses the management and storage challenges that the law enforcement and public safety industries face. It provides the ability to manage, protect, search, retrieve, and collaborate on digital evidence files. See Introduction for more information.

The Digital Evidence Manager includes extensive search options to cover metadata, including dates, media name, or asset type, just to name a few. After searching for and retrieving files, regardless of where they are stored (online, near-line, or offline), you can easily export the files to other tools and locations.

When searching for videos as digital evidence, the Digital Evidence Manager uses a low resolution proxy video (a fraction of the size of the original) as the primary video footage received. This low resolution proxy file is always paired with its original source video, regardless of where the video is stored.

In order to have the low resolution proxy video and thumbnail files available, be sure to enable the generation of them in User Preferences of Target and Process, and Target and Process Policies.

The Digital Evidence Manager window features two main tabs at the top of the application. This allows you to switch between the search or export functionality.

- **Search** - Comprised of a **Search Criteria** pane to find digital evidence files, a **Search Results** pane to select specific files from the search video to in a Media Viewer, and an **Export Queue** pane to view a list of files to export.
- **Export** - Includes an **Export Job Configuration** pane and a **Job Status** pane to use when you are ready to export files found.

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Workflow - Digital Evidence Manager

In order to use the Digital Evidence Manager, assets must be stored in a Vault and the Vault needs to be running. It is necessary to have set up a Target and Process policy to move video into a Vault. For more information regarding these requirements, see Add Vaults and Target and Process Policies.

The following describes working through the Digital Evidence Manager:

1. From your suite of product applications, open the Digital Evidence Manager application (DigitalEvidenceManager.exe). For further explanation of how to launch applications using different operating systems, see Getting Started.
2. The application default opens to the **Search** tab. Enter search criteria and click the **Search** button when done in order to begin the search. See Search and Export.
3. When the search is complete, the results will be displayed in the Search Results pane.
4. Double-click a video thumbnail to open a low resolution proxy video in the Media Viewer. Or right-click on a video clip to choose from an array of useful options.
5. Use the Media Viewer to review and play the video, and clip portions of the video to export. Click the **Export** button to send video clips to the Export Queue.
    - The option to create log entries is available at this point.
6. Select the Digital Evidence Manager **Export** tab to set your Export Job Configuration options. Here, you determine what system to export to, where to save files, and other options. Click **Start Export**. Files in the Export Queue are exported all at once. See Export Digital Evidence.

For more information on how to search for and export video files, see Search Digital Evidence and Export Digital Evidence.

Search and Export

Search

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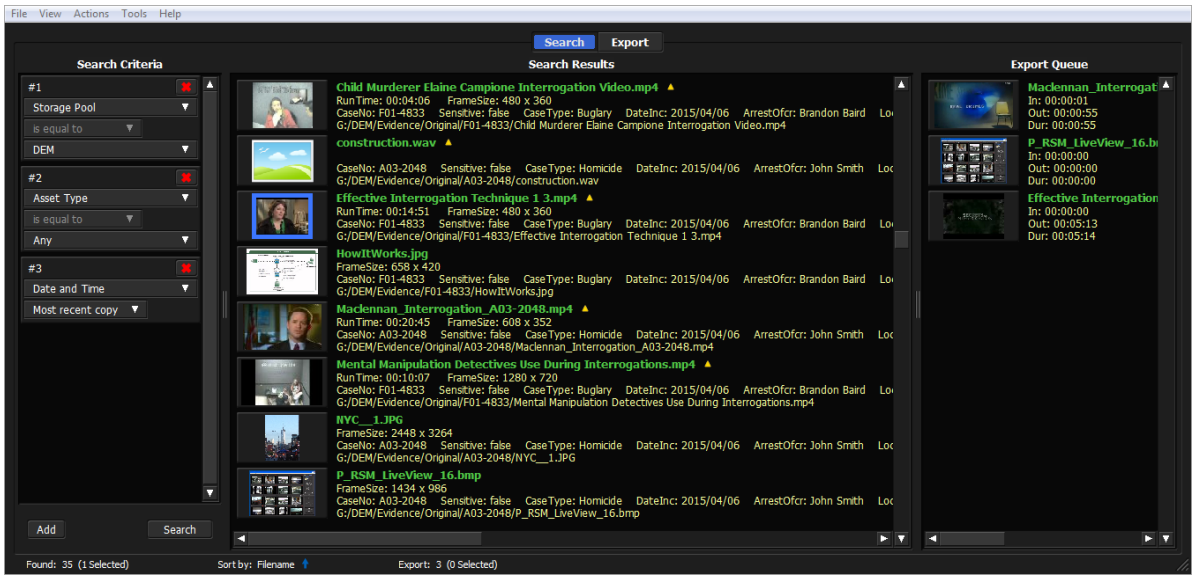

Once you open SoleraTec's Digital Evidence Manager, the **Search** tab is in focus ready to perform powerful searches on stored files. As mentioned in the chapter overview, the Digital Evidence Manager's **Search** tab includes three panes to easily fulfill all your search and export needs:

- **Search Criteria** - Use to select and enter minimal or extensive search parameters to obtain relevant search results. Click the **Add** button to append more search parameters for a more focused search. Click the **Search** button to execute a search on the Information Repository.

- **Search Results** - Displays found files based on Search Criteria. Right-click on a thumbnail to choose an action to perform. Double-click a thumbnail to view the file in a Media Viewer. The Media Viewer offers the capability to select parts of video clips for export. At the bottom of this pane, a total number of items found and a sort filter are displayed.

To play videos in the Media Viewer, you can use the supplied media player (VLC) or Apple QuickTime version 7 or newer (free or Pro) needs to be installed on your computer. For viewing videos, QuickTime is best.

- **Export Queue** - Displays videos selected for export. Right-click on a thumbnail in the Export Queue to choose an action to perform.

Maximize the Search Results pane to allow maximum viewing area by minimizing the Search Criteria and Export Queue panes. To minimize either the Search Criteria or Export Queue pane, move the mouse pointer over the split line and click when the pointer becomes a hand. To maximize the panes again, do the same action only this time the split line is near the window edge.

Export

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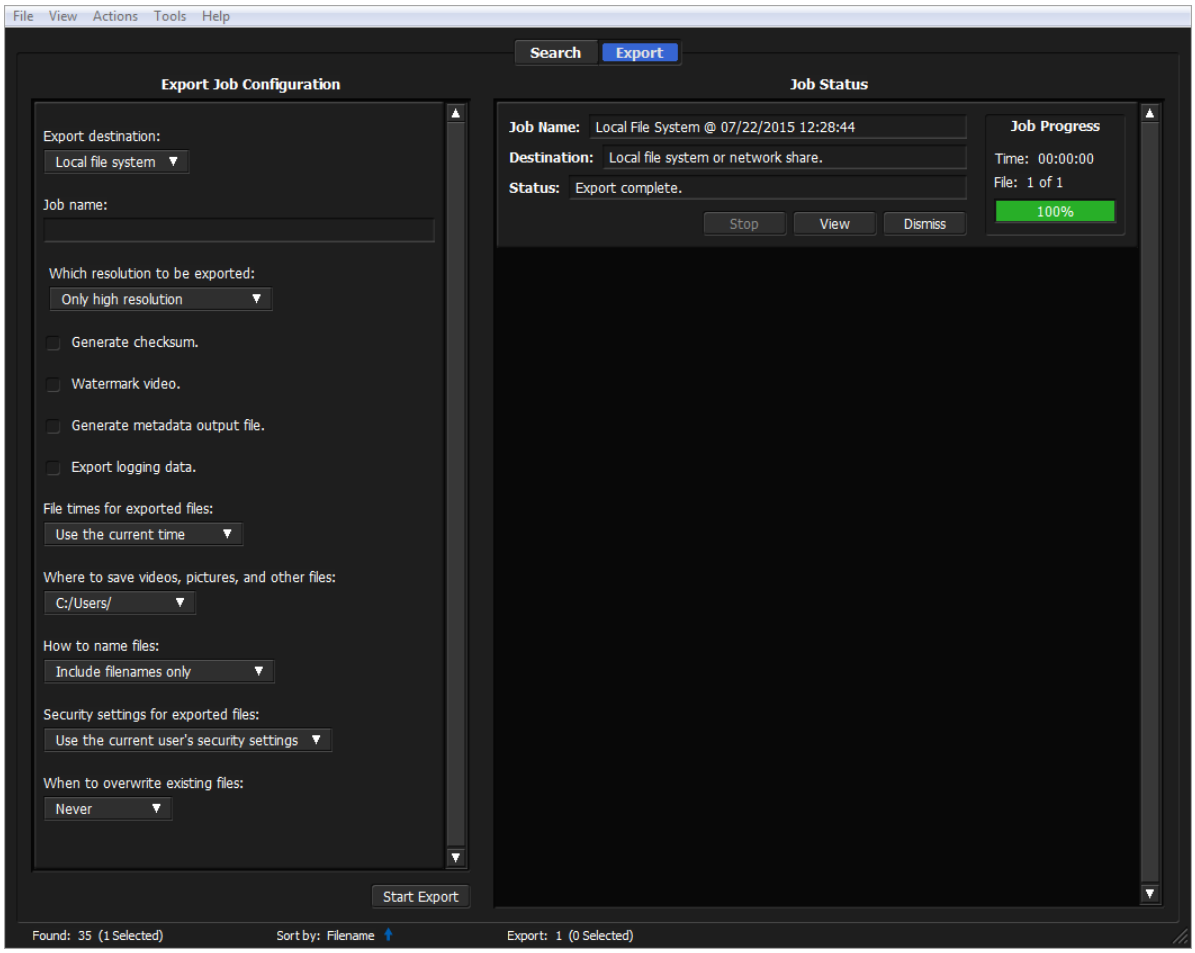

The Digital Evidence Manager **Export** tab consists of two panes for exporting a job:

- **Export Job Configuration** - Select specific parameters for digital evidence to export. You can export digital evidence to a local file system, Final Cut, Premiere, Avid, a Rimage system, or through FTP. Each type of export has its own configuration options. Select the **Start Export** button to begin exporting videos.
- **Job Status** - Displays results as videos are exported.

Digital Evidence Manager Menu Items

Menu Items	Description
File > Export Queue	Select an option from the drop-down list. **Load from -** Load the Export Queue selections from a file. **Save as -** Save the Export Queue selections to a file.
File > Exit	Close the application.

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View > Thumbnails	Select this option to display the search results as thumbnails. Each video in the search results will be displayed as a preview image and the filename.
View > List	Select this option to display the search results as a list. Each video in the search results will be displayed as a preview image, filename, and other basic details about the video clip or image.
View > Details	Select this option to display the search results as a thumbnails with details. Each video in the search results will be displayed as a large thumbnail, a filename, and an in depth list of details about the video or picture.
View > Sort Results	Choose how the search results should be sorted. • The options to choose from are Filename, Pathname, File Type, Time Modified, Time Stored, Size, Host, and Owner. • Your metadata fields are also available as Sort field options. If sorting based on a metadata field, DEM will sort your results based only on the first 64 characters of the field you selected. • From the **Sort order** drop-down list, choose either **Ascending** or **Descending**. • Click **OK** to sort results.
View > Status Bar	A check mark by this menu item will display the status bar at the bottom of the Digital Evidence Manager window. It shows the number of files found, how the files are sorted, and how many files will be exported.
Actions > Search Results	Choose an action to perform on the videos and images in the Search Results pane. This menu can also be accessed by right-clicking on a video in the Search Results pane. • **Show Related Files** - Select to view all related files for the video or image. • **Show/Edit Metadata** - Select to show and edit the metadata for the video or image.

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	• **Change Thumbnail** - Choose a different preview image to be displayed as the thumbnail image for the selected video or image. • **Change Low Res** - Choose a Low Res to associate with the selected video. • **Add File to Group** - Add the selected video or image to a group. • **Remove From Search Results List** - Remove the selected video or image from the Search Results list. • **Select All** - Select all of the videos and images in the Search Results. • **Unselect All** - Unselect all of the videos and images in the Search Results. • **Send to Export Queue** - Send the selected video or image to the Export Queue. • **Play -** Open the Media Viewer with the selected video queued up and ready to play.
Actions > Export Queue	Choose an action to perform on the videos and images in the Export Queue pane. This menu can also be accessed by right-clicking on a video in the Export Queue pane. • **Show Related Files** - Select to view all related files for the video or image. • **Show Metadata** - Select to show the metadata for the video or image. • **Rename Export File** - Select to rename an export file or reset file to the original name. • **Remove From Export Queue** - Remove the selected video or image from the Export Queue. • **Select All** - Select all of the videos and images in the Export Queue. • **Unselect All** - Unselect all of the videos and images in the Export Queue. • **Play -** Open the Media Viewer with the selected video queued up and ready to play.

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Tools > User Preferences	Open the Digital Evidence Manager User Preferences window.
Help > Current Page	Open online help to the Digital Evidence Manager webpage.
Help > Digital Evidence Manager Overview	Open online help with focus on Digital Evidence Manager.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open the support webpage.
Help > About Digital Evidence Manager	Open the About Digital Evidence Manager window.

For more information see Search Digital Evidence and Export Digital Evidence.

Search Digital Evidence

A search for digital evidence will locate all of the files that fit the search criteria you enter.

The search is an "and" search, meaning that the more search parameters you specify, the smaller and more targeted the list of search results becomes. For example, searching for "the man" is the same as searching for "the AND man". Only content that contains both the words "the" and "man" will be found. If you want to search content which contains "the" or "man" or both, use "the OR man".

The following are instructions to give you a better idea on how to search for and select digital evidence for export using the Digital Evidence Manager tool:

1. Launch the Digital Evidence Manager.
2. The Digital Evidence Manager opens with the **Search** tab in focus. In the Search Criteria pane, begin your search for video by clicking the **Select Search Type** drop-down list for a list of search options. Work your way through the search criteria by entering values for the search block type.

Element	Description
Any Metadata Field	Type a value into the textbox to search any metadata field across the entire network. This works like a global search. Also choose from **contains**, **does not contain**, **is equal to**, and **is not equal to** from the drop-down list.

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Element	Description
Asset Type	Search for a certain asset type. Choose from **Video, Picture**, **Audio**, or **Regular File** (any file that is not a video, picture, or audio track) from the drop-down list in order to limit your search to that type. Or choose **Any** and any asset type will be searched.
Vault Name	Limit your search to a particular Vault. Select the device from the drop-down list.
Storage Pool	Limit your search to only a specific storage pool. Select the storage pool from the drop-down list.
Media Name	Increase the speed of your search by limiting the search to a particular unit of media. Select the media from the drop-down list.
Content	Search for a word or phrase that is contained in the file. If you select **Content**, remember that Phoenix DEM supports content searching with wildcards, but only if a video script file has been ingested with the video. The video script file is necessary for searching content in videos because it includes all the video dialog and dialog time codes associated in the video. The name of the video script file is identical to the video file name. A content search can also be done on a closed captioning file that has been generated at ingest.
Pathname	Limit your search by typing either all or part of the filename you want to find.
Hostname	Limit your search to a specific computer. When a computer name is entered, only video stored from that computer is listed. This box may contain only a portion of the computer name, is case sensitive, and allows Wildcards.
Project Name	Type all or part of the project name in the textbox to limit your search to that specific project. Also choose from **contains**, **does not contain**, **is equal to**, and **is not equal to** from the drop-down list.
Clip Name	Type all or part of the clip name in the textbox to limit your search to that specific clip name. Also choose from **contains**, **does not contain**, **is equal to**, and **is not equal to** from the drop-down list.

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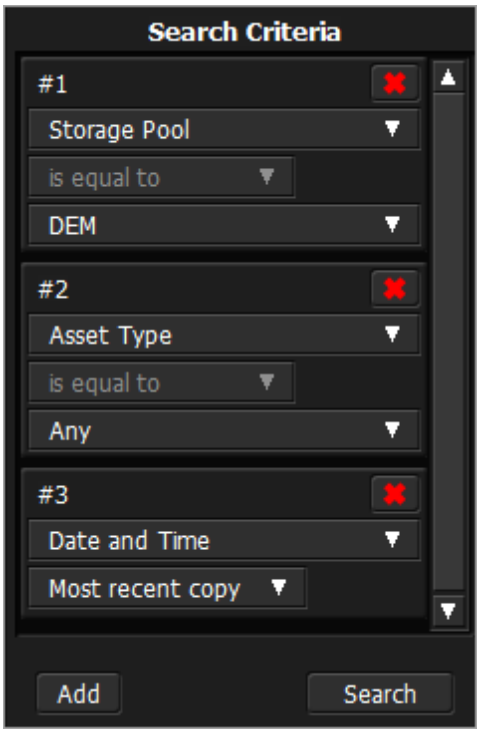
Element	Description
Date and Time	Specify how dates are used to locate files. Use the drop-down list to choose from **Most recent copy**, **Point in Time at**, **Modified before**, **Modified after**, **Modified between**, **Stored before**, **Stored after**, or **Stored between**. Select a date and time by clicking on the Clock button.

3. Click the **Add** button to add more search blocks to your search (searches become more focused as more criteria is specified).

   The image below is an example of the Search Criteria pane. It is displaying two search blocks defined and a third search block needing the search type selected.



Customize your search for search types that are not currently available; use as many different search types as you need. Advanced users do this by creating a MetadataExtensions.cfg text file with search fields that are specific to your needs. If you do build this file, it must be ingested with the video in Target and Process. See MetadataExtensions.cfg.

4. After setting search criteria or typing a search phrase, click the **Search** button to search through the Information Repository for files that match the criteria you have defined. Results, including metadata, appear in the Search Results pane.

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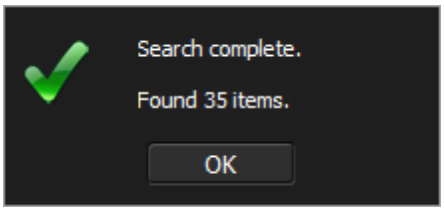

If there are too many results, not enough results, or the wrong results, you can always re-define search criteria, add new search criteria, or remove search criteria, and then search again. If a thumbnail is not available, a placeholder image appears as a result.

5. From the Search Results pane, double-click on the thumbnail to view the content in the Media Viewer. See DEM Media Viewer for details.

Alternatively, you can right-click on a video and choose from one of the many options in the drop-down list. These options are also available under **Actions** > **Search Results**.

Element	Description
Show Related Files	Select to view all related files for the video or image (including high resolution originals, preview images, low resolution proxy videos, logging files, and any other related files in the Information Repository). In the Related Files window, the yellow triangle next to the image name indicates an exact match with search criteria. Click on the folder icon to the left above the preview image when in Details view mode to quickly access the Related Files window.
Show/Edit Metadata	Select to show metadata for the selected video or image. From this window, you have the option to directly edit and save the metadata for the selected file. • **Copy -** Select to copy the metadata for the selected video or image to your clipboard. This copied information can be pasted into a text document for any use. • **Edit -** Select to make changes to the metadata values for the selected video or image. Make changes to the appropriate fields and click **Save** when finished. The **Edit** button is only enabled if there is a MetadataExtensions.cfg file located at <install-dir>\Config.

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Element	Description
	Click the information icon to the right above the preview image when in Details view mode to quickly access and edit metadata.
Change Thumbnail	Choose a different preview image to be displayed as the thumbnail image for the selected video or image. 1. Click the **Browse** button to navigate to an image that will be set as the new thumbnail. 2. Choose the destination to store this new information. Set the Vault, Media, and Storage Pool. Setting a destination is optional. Not all values need to be set.
Change Low Res	Choose a Low Res to associate with the selected video or image. 1. Click the **Browse** button to navigate to Low Res that will be set as the new Low Res. 2. Choose the destination to store this new information. Set the Vault, Media, and Storage Pool. Setting a destination is optional. Not all values need to be set.
Add File to Group	Choose a new file that will be included with the selected video or image in that group. 1. Click the **Browse** button to navigate to a new file that will be included in the group of the selected video or image. 2. Choose the destination to store this new information. Set the Vault, Media, and Storage Pool. Setting a destination is optional. Not all values need to be set.
Remove from Search Results list	Remove the selected video or image from the Search Results list. The removed file is not deleted and will be available for any subsequent searches.
Select All	Select all of the videos and images in the Search Results.

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Element	Description
Unselect all	Unselect all of the videos and images in the Search Results.
Send to Export Queue	Send the selected video or image to the Export Queue. This will send the entire video without creating any clips or logs.
Play	Open the Media Viewer with the selected video queued up and ready to play.

6. In the Media Viewer, click an embedded time display option.

7. In the Media Viewer, select a video clip to export. To do this, click and drag the timeline pointer to the point where you want the clip for export to begin, and then click the left scissor button. To end the clip, click and drag the timeline pointer to an end point, and then click the right scissor button.

   You have the option of creating a log entry that will be associated with this clip. See Logging for more details.

8. Once you have selected the part of the video you want to export, select **Export**. The clip is sent to the Export Queue pane. In the Export Queue, click the folder to the left above the video clip to view its related files.

9. In the Related Files window, select the checkbox for each file to export with the video clip.

   Once a clip is in the Export Queue, you can still change which part of the video to export. Click the video from the Export Queue. The Media Viewer opens again. After you have made your changes, click **Commit** to save changes, and then close the Media Viewer window.

10. You can right-click on a video in the Export Queue and choose from one of the many options in the drop-down list. These options are also available under **Actions** > **Export Queue**.

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Element	Description
Show Related Files	Select to view all related files for the video or image (including high resolution originals, preview images, low resolution proxy videos, logging files, and any other related files in the Information Repository). In the Related Files window, the yellow triangle next to the image name indicates an exact match with search criteria. Click on the folder icon to the left above the preview image when in Details view mode to quickly access the Related Files window.
Show Metadata	Select to show metadata for the selected video or image. Click the information icon to the right above the preview image when in Details view mode to quickly access and edit metadata.
Remove from Export Queue	Remove the selected video or image from the Export Queue. The removed file is not deleted and will be available for any subsequent searches.
Rename Export File	Select to rename an export file. Type in a new name and click the **Ok** button to save the new name. If no extension is supplied, the correct extension will be appended to the new name. If an extension is entered which is not correct for the content, the correct extension will be appended to the new name. To reset the file back to the original name, click the **Reset** button.
Select All	Select all of the videos and images in the Export Queue.
Unselect all	Unselect all of the videos and images in the Export Queue.
Play	Open the Media Viewer with the selected video queued up and ready to play.

11. When done selecting videos to export and they are in the Export Queue, click the **Export** tab at the top of the main window to activate the export panes. Set the options found in section Export Digital Evidence to complete the export process.

You can save your Export Queue selections for later use. See Save and Load Export Queue .

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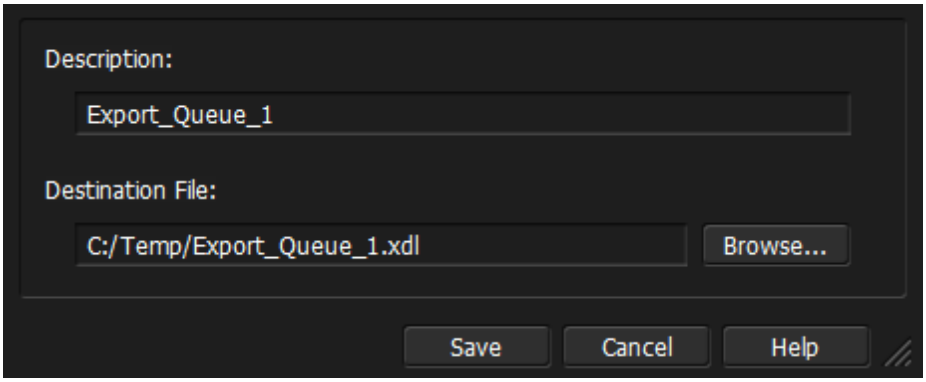
Save and Load Export Queue

Being able to save the content selections that are in the Export Queue is a very useful feature of the Digital Evidence Manager. After searching for digital evidence and sending the content to the Export Queue, you have the option to save the selections to a .xdl file (Export Decision List). Once they have been saved to a file, you can then share the file or load the Export Queue at a later time with the file of saved selections. This means any work in progress can be saved for later use and it allows multiple users to use the same content selections even though they are working on different machines.

Save the Export Queue Selections

1. Click **File > Export Queue > Save as**. This will open the Save Export Decision List window.



2. Type a description of the clips in the **Description** text box.
3. Type a pathname in the **Destination File** text box or click **Browse** to open the Choose a File window.
    - If you clicked Browse, navigate to a preferred folder and type the file name to be saved as in the **File name** text box. Click Open.
4. Click **Save** in the Save Export Decision List window to complete the save process.

Save Export Decision List window Elements

Element	Description
Description	The description of the export decision list. The description is used to provide a quick reference to what is contained in the export decision list. This is optional.
Destination File	The file to which the export decision list will be saved. Manually enter the pathname of the file or click **Browse** to navigate to a preferred folder and type the file name.

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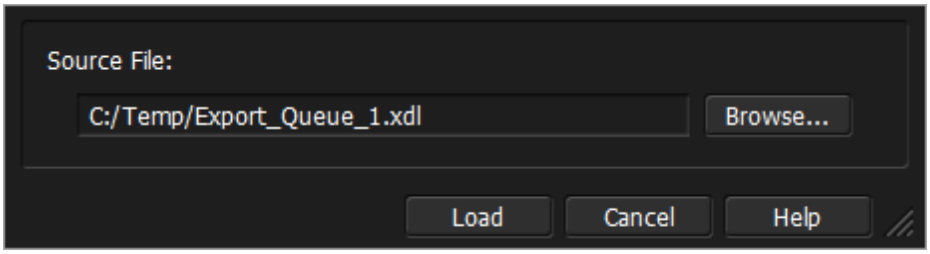
Load the Export Queue Selections from a File

1. Select **File > Export Queue > Load from**. This will open the Load Export Decision List window.



2. Type a pathname in the **Source File** text box or click **Browse** to open the Choose a File window.
   - If you clicked Browse, navigate to the .xdl file that was previously saved from the Export Queue. Click **Open**.
3. Click **Load** in the Load Export Decision List window to load the Export Queue from the file.

Load Export Decision List window Elements

Element	Description
Source File	The file from which the export decision list will be loaded. Manually enter the pathname of the file or click **Browse** to navigate to a .xdl file that will be used.

Media Viewer and Logging

In the Search Results pane, double-click the file you want to view. If the file is a video, the Media Viewer window opens with a low resolution proxy video ready for viewing. If the file is a picture, the Media Viewer opens with the picture being displayed. Along with the video or picture being displayed, all of the log entries for the file are also displayed in the same window (if any have been created).

Remember that low resolution proxy files (also called companion files) are playable videos a fraction of the size of stored originals and are created when data is captured or ingested. They allow for quick retrieval and viewing of stored video. The low resolution proxies remain online, even if their originals are offline. They are entirely managed and fully searchable.

The Media Viewer window is divided into two main areas:

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- **Media Viewer -** Use the Media Viewer to view videos or pictures. You can view videos at different speeds, search metadata content, navigate to a particular point in a file, clip parts of the video for export, and send content to the Export Queue. It is comprised of the basic controls of any popular video viewer (such as volume, play, stop, skip forward, skip back, beginning, and end) and the following additional controls: timeline, scissors, jog shuttle, playback speed, search box, and storyboard. This portion of the Media Viewer window also displays pictures but does not have any of the video controls displayed.

- **Logging -** The logging area of the Media Viewer is used to create logs about specific clips of a video. At the top of this area is a list of all the saved log entries for the selected video. When a log entry has been selected, information on the clip is displayed such as time in and time out, and it provides information about the selected log such as the user who created it, date and time created, bullet color associated with the clip, and the title and description of the clip. The entire Logging panel can be minimized for maximum media viewer viewing, or the panel can be maximized to manage the log entries.

The Media Viewer with a video ready for viewing:

The Media Viewer with a picture displayed for viewing:

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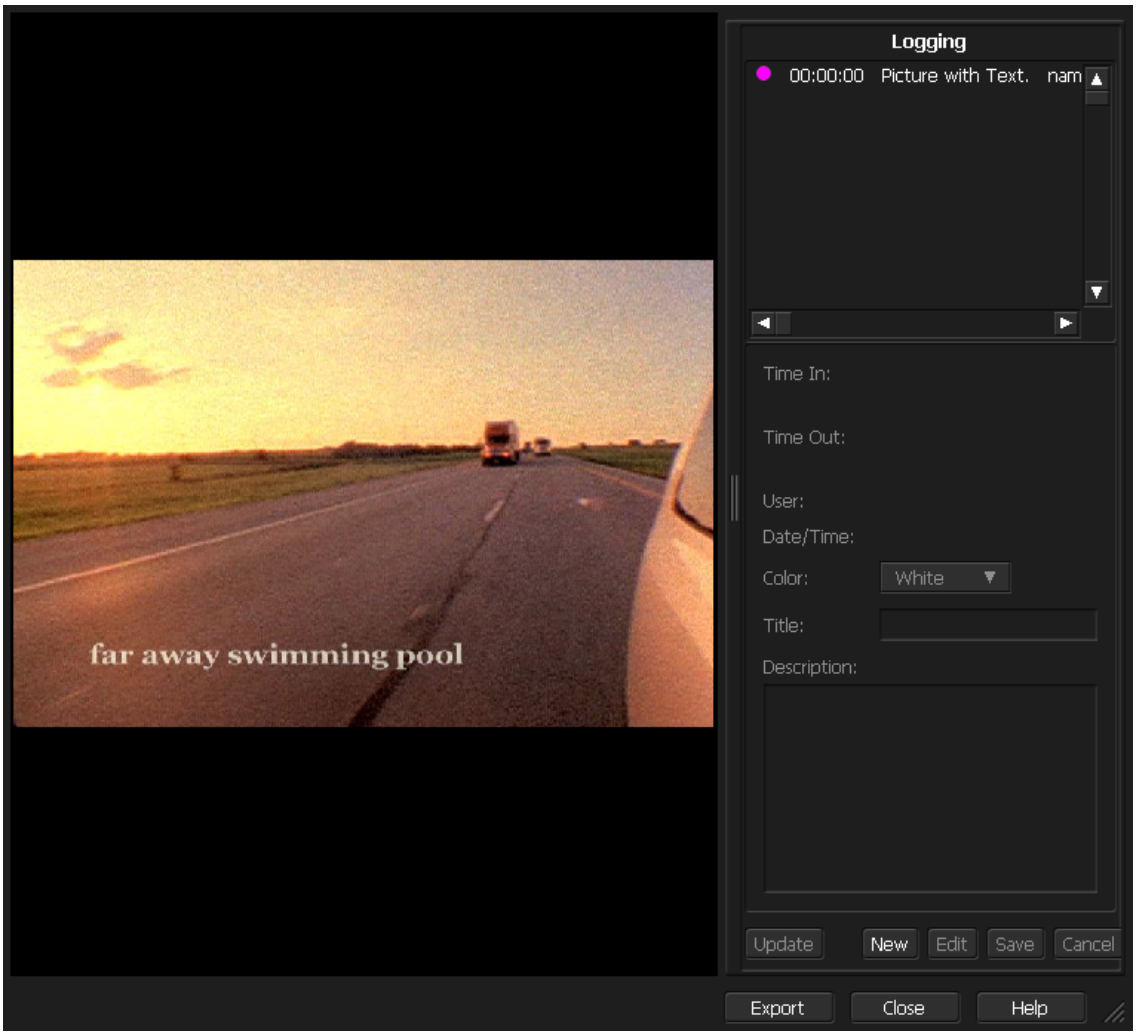

For more information, see Media Viewer and Logging.

Media Viewer

The left side of the Media Viewer window is the actual **Media Viewer**. When the Media Viewer opens, the low resolution proxy video is queued up for viewing (if the proxy video generation was enabled when the video was captured) or the picture selected is displayed. If no low resolution proxy video is available, the original video file is played.

View Video Files

Use the Media Viewer to view videos at different speeds, search metadata content, navigate to a particular point in a file, clip parts of the video for export, and send clips to the Export Queue. It is comprised of the basic controls of any popular video viewer (such as volume, play, stop, skip forward, skip back, beginning, and end) and the following additional controls:

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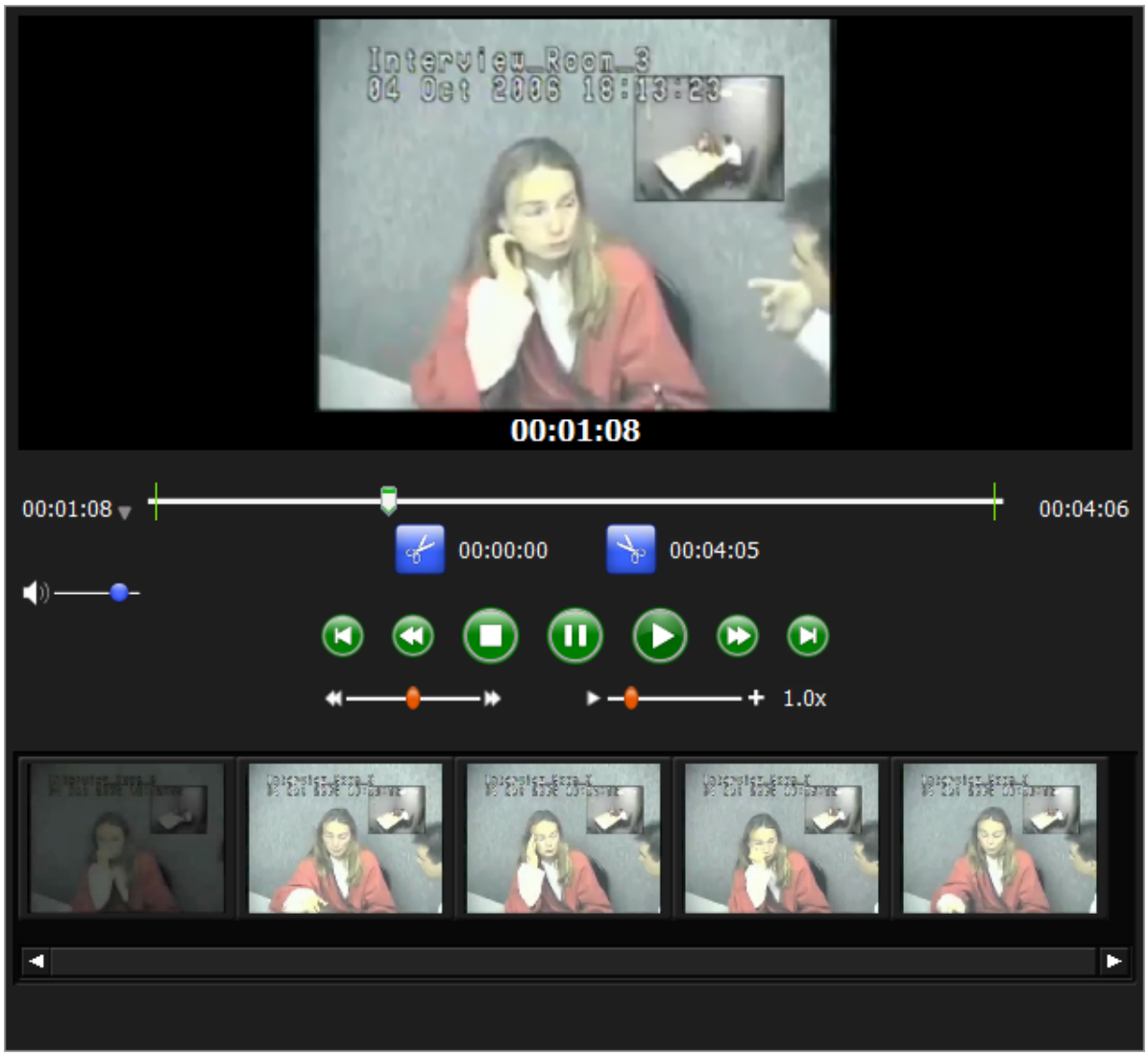

Timeline

The timeline pointer indicates a part of the displayed video. Click, hold, and drag the pointer either forward or backward in the video. Click to the left of the pointer to rewind the video one second at a time, or click to the right of the pointer to advance the video one second at a time. Click and hold in either direction, and the pointer moves automatically one second at a time.

The number to the left is a time code that indicates where the pointer is in the video (and the part being displayed). The number to the right indicates the total length of the video. The vertical green line to the left indicates where a clip begins, and the vertical green line to the right indicates where a clip ends. Only the segment of video between the vertical green lines will be exported. By default, the lines mark the beginning and the end of the video; they can be adjusted using the scissor buttons.

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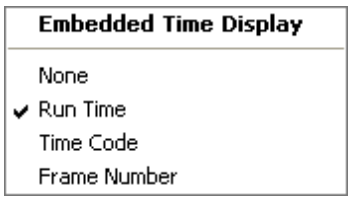
If you set the beginning of the clip to within one second of the beginning of the file and one second of the end of the file, the entire original full resolution file is exported.

Some video includes an embedded time display, or time code, that assigns a number to each video frame of video. This is indicated by a golden triangle in the timeline. Click the triangle to select an embedded time display option.



Scissors

Use the scissor buttons to select clips from the video. Numbers indicate beginning and ending times. Click the left button to denote the beginning of the clip, and the right button to denote the end of the clip. You can repeat this process to export as many clips from a video as you need; this creates multiple clips from a single file. However, before selecting and exporting a second clip, you need to add the currently selected clip to the export queue by clicking the **Export** button on the main Media Viewer window.

Jog Shuttle and Playback Speed

Use the Jog shuttle (when available it is the control on the left), to fast forward or fast reverse the video clip. Click, drag, and hold the orange control to the left to rewind, or to the right to fast forward. Use the control on the right, Playback speed, to run the video faster or slower. Drag the orange control left to play more slowly or right to play more quickly.

Search box

Use the **Search** box (when available) to find content from associated video metadata in stored video.

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Type a term in the **Search** text box, and then click the **Search** button to find the term in the video.

- Content searching is supported and you can use wildcards, but only if a video script file has been ingested with the video.

Storyboard

The Storyboard strip at the bottom of the Media Viewer displays still images taken from the video file at regular intervals. It provides a visual representation of the video file contents and an easy way to quickly see and navigate to a point of interest in the video. Use the horizontal scrollbar to scroll through the frames. As you move your mouse over an image, the time associated with the image is displayed (by default, at one-minute intervals). Click an image to jump to that point in the video. Note that the pointer jumps to the corresponding point on the timeline.

The time interval parameter can be changed in the DEM User Preferences.

Keyboard Navigation

The Media Viewer also supports the following case sensitive keyboard navigation:

Action	Key Combination
Frame-by-frame forward	ALT + RIGHT ARROW
Frame-by-frame backward	ALT + LEFT ARROW
Move one second forward	RIGHT ARROW
Move one second backward	LEFT ARROW
Skip forward 30 seconds	SHIFT + RIGHT ARROW
Skip backwards 30 seconds	SHIFT + LEFT ARROW
Toggle play/pause	SPACE BAR

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Action	Key Combination
Skip to "in" point	SHIFT + I
Skip to "out" point	SHIFT + O
Set "in" point	I
Set "out" point	O
Increase playback speed	J
Decrease playback speed	L
Stop playback	K

For more information see Search Digital Evidence and Video Content Manager.

View Picture Files

Use the Media Viewer to view pictures. When viewing still images, none of the video controls are displayed and only the picture is up for viewing.

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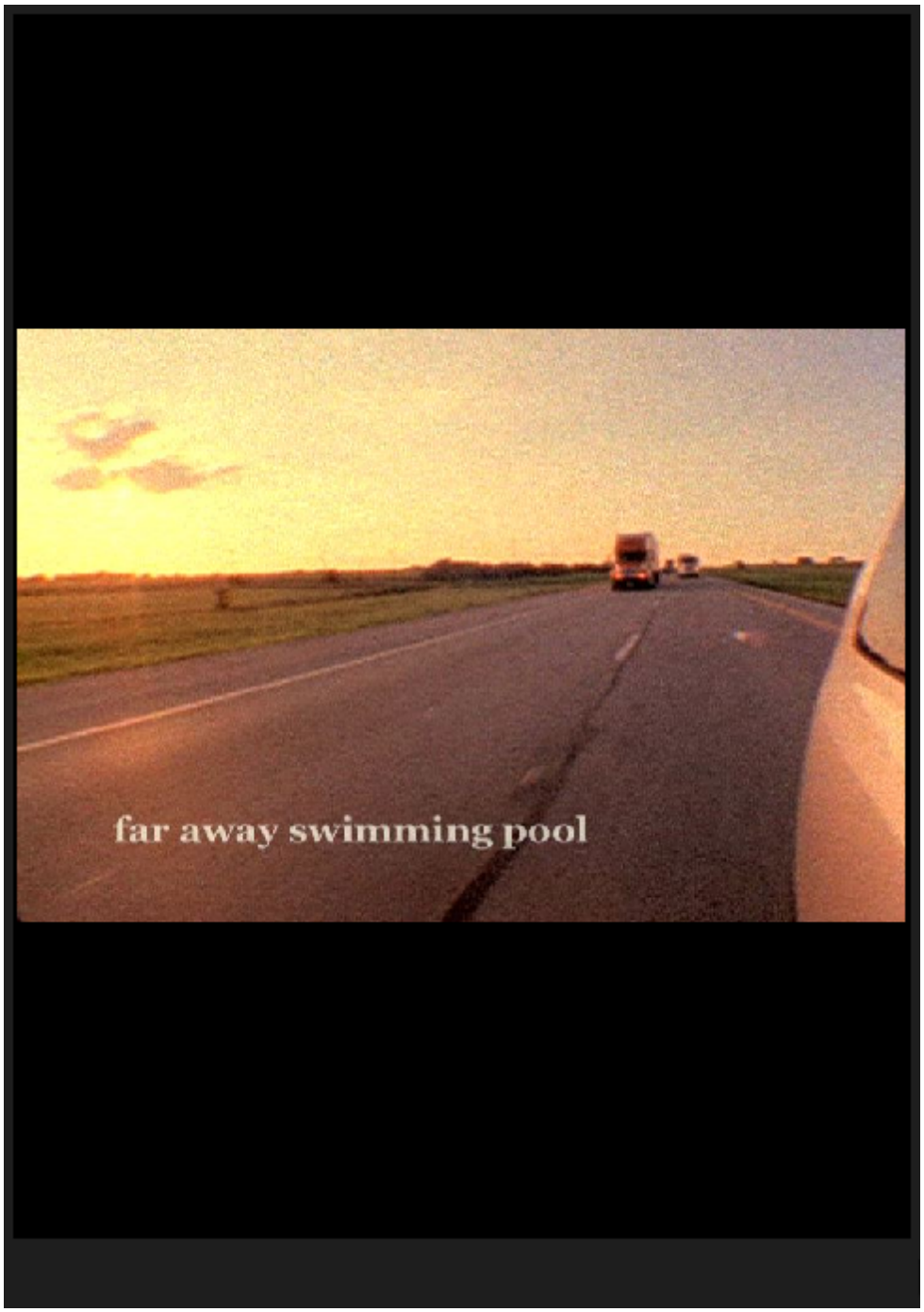

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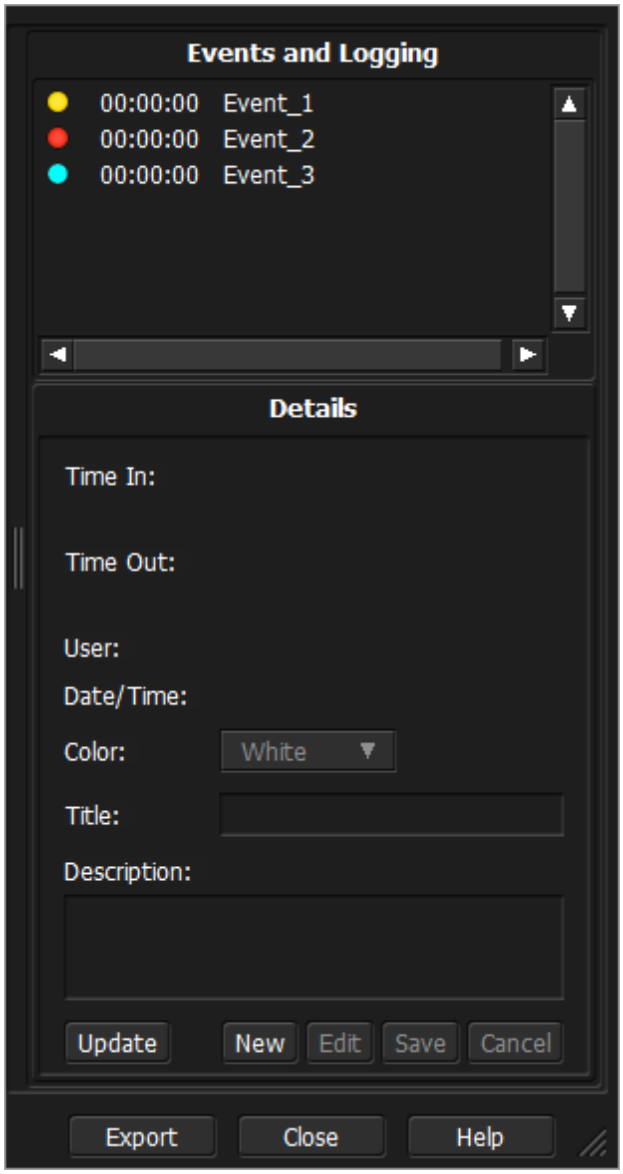
Logging

The right side of the Media Viewer window is the **Logging** panel. Creating log entries for specific clips or images allows a user to add and save notes about the content of the video or picture that is being viewed. These notes are turned into logs which are grouped together and associated with the selected video. Each log can be saved as a simple text file that can be used and viewed even if the Media Viewer is not available. Any user can edit, add, and delete logs even if they were not the original user to create them. This allows for multiple users to work on a project and save all of the work together in a single location. Once logs have been created, they become searchable content and can be entered as search criteria in the main Search tab of the Digital Evidence Manager.



List of Log Entries

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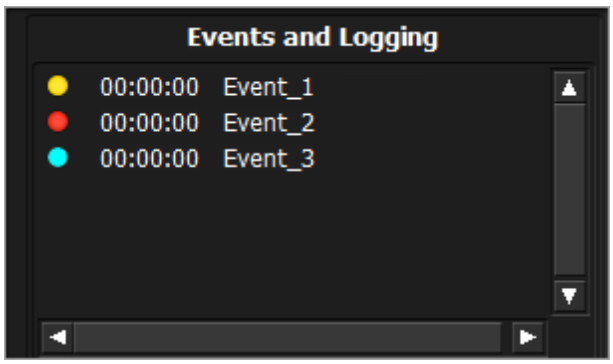
This list displays each log entry and is organized chronologically according to the clip start time. Each entry in the list will have a colored bullet, the start time of the clip, the title, and the user who created the log entry. Select a log from this list to display all of its information and to view, edit, or delete it.

Log entries for pictures are organized chronologically according to time created and start time is always 00:00:00.



To access the shortcut controls for managing the list of log entries, right-click on a selected entry. Select from the following options:

- **New** - Create a new log entry.
- **Edit** - Edit the selected log entry.
- **Delete -** Delete the selected log entry.
- **Export** - Send the log entry and the clip or picture associated with it to the Export Queue.
- **Save As** - Save the log entry as a text file (.txt) and create a .png file of the picture or first frame of the video clip where the log entry starts. The text file will contain all of the basic information about the log entry and can be viewed independent of the video clip or picture.

Information about Selected Log Entry

The information displayed about a selected log includes information about the clip or picture and notes about the content.

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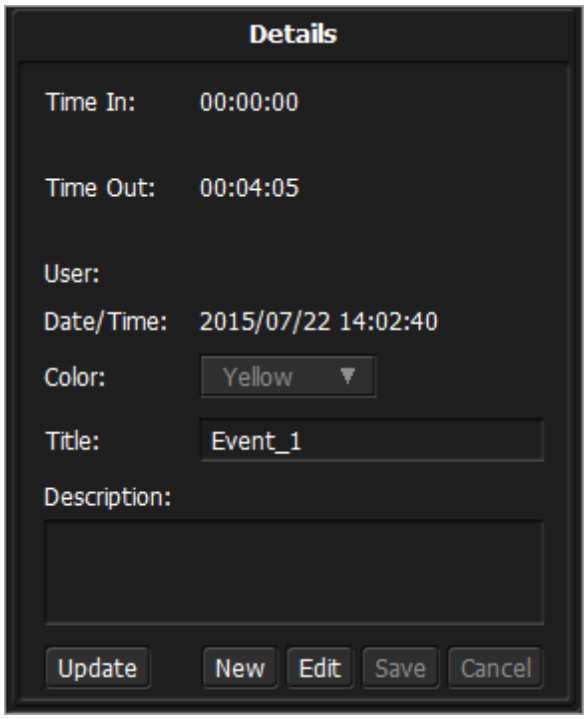

Logging Panel Elements

Element	Description
Time In	The beginning time of the clip. For videos: This value can be changed by using the left scissors button in the Media Viewer. The Run Time "in" time is displayed first and then the Time Code "in" time is displayed below (if available for that video). For pictures: Time In will always be 00:00:00.
Time Out	The end time of the clip. For videos: This value can be changed by using the right scissors button in the Media Viewer. The Run Time "out" time is displayed first and then the Time Code "out" time is displayed below (if available for that video). For pictures: Time Out will always be 00:00:00.
User	The user who created the log entry.
Date/Time	Year/Month/Day and time that the log entry was created or last edited.

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Element	Description
	The date and time will be updated when the log entry is edited and then saved.
Color	The color of the bullets associated with the clip or picture and log entry. Each log entry has a corresponding bullet color that can be used to visually associate related clips and pictures. Choose from White, Red, Yellow, Green, Cyan, Blue, Magenta, or Black.
Title	The title of the clip or picture and log entry. A user can change this value by typing a new title in the text box. The title will be displayed in the list of log entries at the top of the Logging panel and is searchable content in the search criteria tab of the Digital Evidence Manager.
Description	The description of the clip or picture and log entry. The description is optional. A user can change this value by typing a new description in the text box. The description is searchable content in the search criteria tab of the Digital Evidence Manager.

Create a New Log Entry

The steps for creating a log entry for clips and pictures are the same after step 1.

1. For video only: Create a clip using the Media Viewer scissors and controls.
2. Click **New**.
3. Choose a color from the **Color** drop-down list.
4. Enter a title of the clip in the **Title** text box.
5. Enter a description of the clip in the **Description** text box.
6. Click **Save**.

User and Date/Time are not available for direct editing. Date/Time will change after a log entry has been edited and then saved.

Edit a Log Entry

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Any log entry that is displayed in the list can be edited.

1. Select a log entry that you want to edit.
2. Click **Edit**. All of the information contained in that log will be displayed.
3. Edit the information and then click **Save**.
    - Editing information is done similarly to steps 3 - 6 in the above directions about how to create a log entry. If needed, use the scissor buttons to adjust the Time In and Time Out for the video clip.

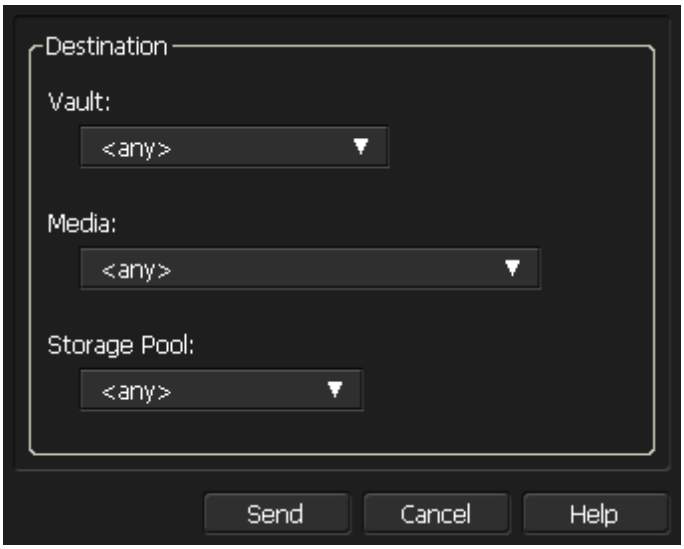
Delete a Log Entry

1. Select a log entry from the list that you want to delete.
2. Right-click on that entry and select **Delete** from the shortcut menu.

Update the Repository with Log Changes

The Information Repository needs to be updated with any changes that have been made to logs.

1. After adding new, deleting, or editing logs, click **Update**. The Send Logging Information window opens.



2. Choose a value from the **Vault**, **Media**, and **Storage Pool** drop-down lists.
    - You can specify as many as you like or leave them as <any>.
3. Click **Send** to send these changes to the Repository.

Send Logging Information window Elements

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Element	Description
Vault	From the drop-down list, select a Vault or select **<any>** to use any available vault. If a Vault is selected, the Media and Storage Pool drop-down lists are automatically populated with the media and storage pools on the given Vault. If <any> is selected, then the Media and Storage Pool options contain all available media and storage pools.
Media	Media refers to the names of individual units of media in the Vaults within the Information Repository. From the drop-down list, select the media or select **<any>** to use any available vault. The system automatically looks for any storage pools comprised of the selected media. If it cannot find any, then the Storage Pool drop-down list displays <any>.
Storage Pool	Storage pools are groupings of media on a single policy used for a particular purpose. For example, if you had a policy called "Night backup" and it wrote to several units of media, you would use a "Night backup" storage pool and assign to it every unit of media to use for that purpose. For more information see Prepare Media, Storage Pool. From the drop-down list, select a storage pool or select **<any>** to use any available storage pool.

For more information see Search Digital Evidence and Digital Evidence Manager.

Export Digital Evidence

After you have searched for and selected the assets to export from the Digital Evidence Manager **Search** tab, and the assets are in the Export Queue, use the Digital Evidence Manager **Export** tab to export the assets in different ways.

Access the Export window panes by clicking the **Export** tab at the top of the main Digital Evidence Manager application window.

Depending on your system, the following options may or may not be available for you to select from. The contents in the Export Job Configuration pane are dynamic depending on the **Export Destination** chosen. Work your way through the Export Job Configuration pane parameters.

Local File System

The **Export Destination** of local file system is the default setting for this pane. Populate the options when **Local File System** is selected.

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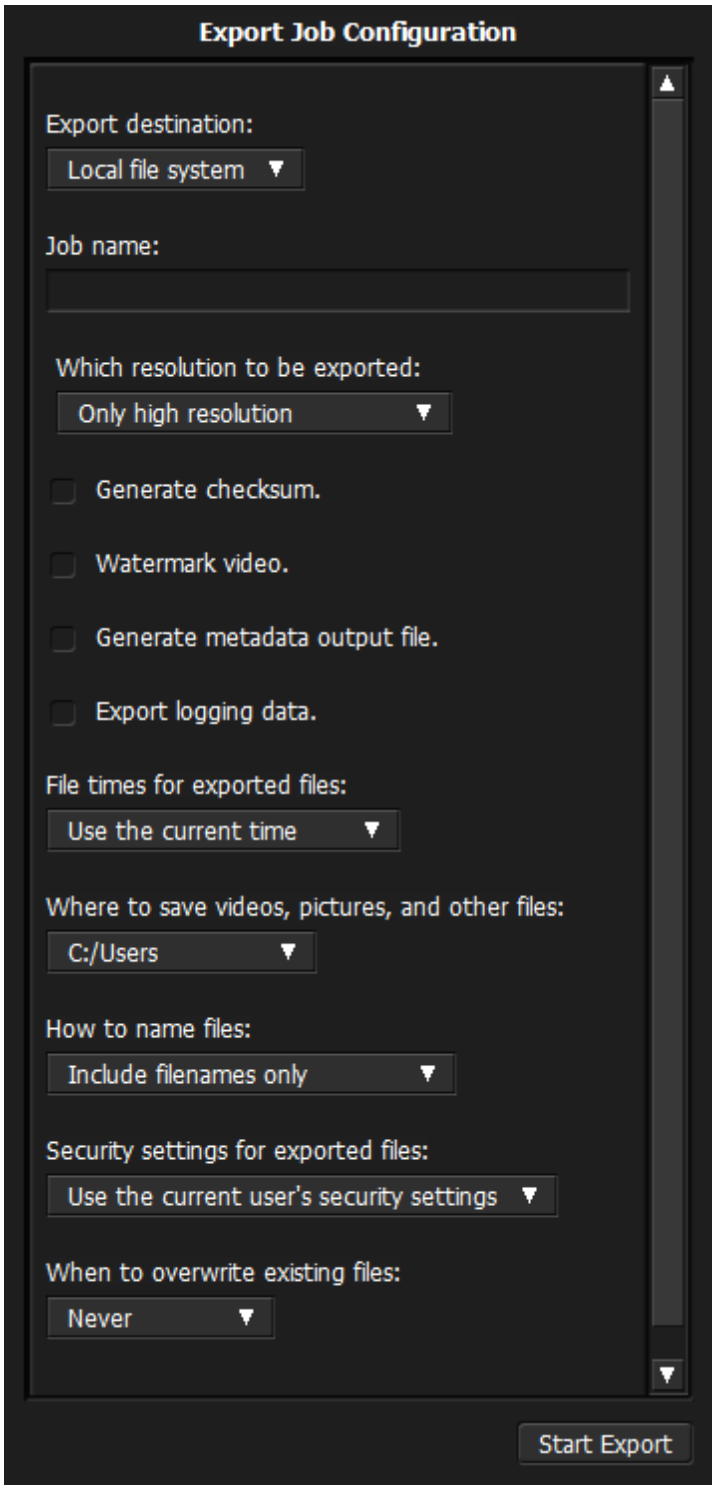

Element	Description
Export destination	Define where files are exported to. (Local File System.)

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Element	Description
Job name	Type a job name to associate a text name with the job. This name appears in job logs.
Which resolution to be exported	Choose which resolution of the asset is to be exported. From the drop-down list, choose **Only high resolution**, **Both high and low resolution**, or **Only low resolution**.
Generate checksum	Select to generate a checksum file for each exported asset file. The checksum (or digital fingerprint) is calculated using the SHA256 hash algorithm. The resulting filename is the original base name with a .sha256 extension.
Watermark video	Select to apply a watermark to the exported video file. When this item is selected, the pane expands to show additional fields. This is only available for video files. **Placement** - Specify where the watermark should be placed in the video. Select from center, upper left, upper right, lower left and lower right. **Type** - Specify the type of watermark to be applied. If **Text**, then there are fields displayed to input the text size, text color, and the actual text to be used as the watermark. If **Bitmap**, then a box displays where the pathname of a watermark file can be entered, or click the **Browse** button to browse for the watermark file. When using QuickTime as the backend to watermark a video, the preferred format for a watermark file is Portable Network Graphics (.png extension). If you use a bitmap (.bmp) file, the watermark image will not be transparent and it will be surrounded by a white box covering up part of the video. No watermark can be added to audio files.
Generate metadata output file	Generate metadata xml files for output along with asset. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**. • **Create multiple files** - The metadata file has the same name as its associated asset file, but with the .xml extension. One metadata file per asset is created and they stick together.

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Element	Description
	• **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. At a minimum the data included contain pathname, file id, size, and the date and time modified.
Export logging data	Generate an XML formatted file with the contents of the log entries associated with the video clip(s) and image(s) that are to be exported. The resulting filename is the original base name with the extension _lgg.log.
File times for exported files	Assign the original file time or the export time (current time) to the retrieved files.
Where to save videos, pictures, and other files	Export data back to the user's document directory, its original location, or to any other location on the network. **User's home directory** - Export data to the user's home directory. The individual user's home directory will be shown for this option. **Original location** - Export data to its original location. **Different location** - Export data to another location. Use the Browse For Folder window to select the location, and click **OK**.
How to name files **Active only for Different Location and Export to Rimage**.	Define how selected data is arranged when exported. There are three options: **Include full original pathnames** - This option recreates the source file structure. The exported data file structure matches that of the source file. For example, if the source is "C:\Accounting\Marketing\...", then the exported data is "C\Accounting\Marketing\...". **Include filenames only** - This option ignores file folders, and the exported data is comprised of only files. **Include filenames only** do not work correctly if selected files have identical names. When working with identical names, use **Include full original pathnames** or **Include pathnames starting at selected items**.

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Element	Description
Security settings for exported files	Assign the original security settings or the current user's security settings to the exported files.
When to overwrite existing files	Select an option of **Never**, **Only if newer**, or **Always**, outlining when to overwrite files. If the files exported already reside in some form on the target computer - that is a conflict and the export job does not work.

Rimage

Populate the options when **Rimage** is selected.

Export to Rimage only works if your Rimage system and Phoenix DEM export are configured properly.

When exporting to the Rimage, do not stop Phoenix DEM until all jobs have finished. If you do, temporary files are not removed and those files will have to be removed manually. To manually remove temporary files, go to the Rimage Export Folder, and remove <user name>_<uuid>.

For more information see Rimage Configuration Window.

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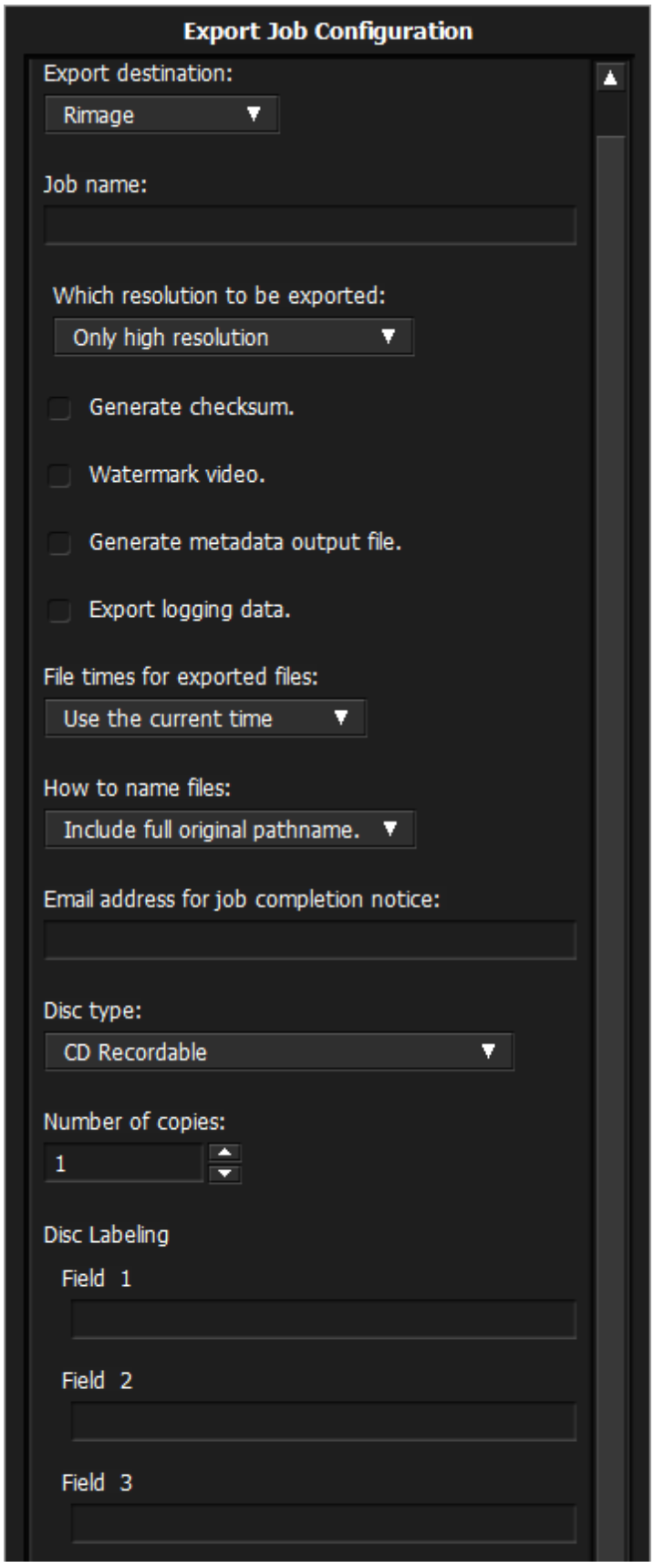
Export Job Configuration
Export destination:
Rimage
Job name:
Which resolution to be exported:
Only high resolution
Generate checksum.
Watermark video.
Generate metadata output file.
Export logging data.
File times for exported files:
Use the current time
How to name files:
Include full original pathname.
Email address for job completion notice:
Disc type:
CD Recordable
Number of copies:
1
Disc Labeling
Field 1
Field 2
Field 3

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Element	Description
Export destination	Define where files are exported to. (Export to Rimage.) This option is only available when it is enabled in your User Preferences.
Job name	Type a job name to associate a text name with the job. This name appears in job logs.
Which resolution to be exported	Choose which resolution of the asset is to be exported. From the drop-down list, choose **Only high resolution**, **Both high and low resolution**, or **Only low resolution**.
Generate checksum	Select to generate a checksum file for each exported asset file. The checksum (or digital fingerprint) is calculated using the SHA256 hash algorithm. The resulting filename is the original base name with a .sha256 extension.
Watermark video	Select to apply a watermark to the exported video file. When this item is selected, the pane expands to show additional fields. This is only available for video files. **Placement** - Specify where the watermark should be placed in the video. Select from center, upper left, upper right, lower left and lower right. **Type** - Specify the type of watermark to be applied. If **Text**, then there are fields displayed to input the text size, text color, and the actual text to be used as the watermark. If **Bitmap**, then a box displays where the pathname of a watermark file can be entered, or click the **Browse** button to browse for the watermark file. When using QuickTime as the backend to watermark a video, the preferred format for a watermark file is Portable Network Graphics (.png extension). If you use a bitmap (.bmp) file, the watermark image will not be transparent and it will be surrounded by a white box covering up part of the video. No watermark can be added to audio files.
Generate metadata output file	Generate metadata xml files for output along with asset. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**.

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Element	Description
	• **Create multiple files** - The metadata file has the same name as its associated asset file, but with the .xml extension. One metadata file per asset is created and they stick together. • **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. At a minimum the data included contain pathname, file id, size, and the date and time modified.
Export logging data	Generate an XML formatted file with the contents of the log entries associated with the video clip(s) and image(s) that are to be exported. The resulting filename is the original base name with the extension _lgg.log.
How to name files **Active only for Different Location and Export to Rimage.**	Define how selected data is arranged when retrieved. There are three options: **Include full original pathnames** - This option recreates the source file structure. The retrieved data file structure matches that of the source file. For example, if the source is "C:\Accounting\Marketing\...", then the retrieved data is "C\Accounting\Marketing\...". **Include filenames only** - This option ignores file folders, and the retrieved data is comprised of only files. **Include filenames only** do not work correctly if selected files have identical names. When working with identical names, use **Include full original pathnames** or **Include pathnames starting at selected items**.
E-mail address for job completion notice	Type a valid e-mail address to define where Rimage sends an e-mail when the Rimage job is finished.
Disc type	Define the type of media for Rimage to make.
Number of copies	Define how many copies of the data for Rimage to make. Press TAB or ENTER for the new number typed to take effect.
Disc labeling	Define the information on media labels for the media that Rimage is producing.

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Element	Description
	The number and titles of the fields available depend on what is entered in the Rimage Configuration window. If a field is not present, add it using the Rimage Configuration window.

FTP Site

Populate the options when FTP Site is selected.

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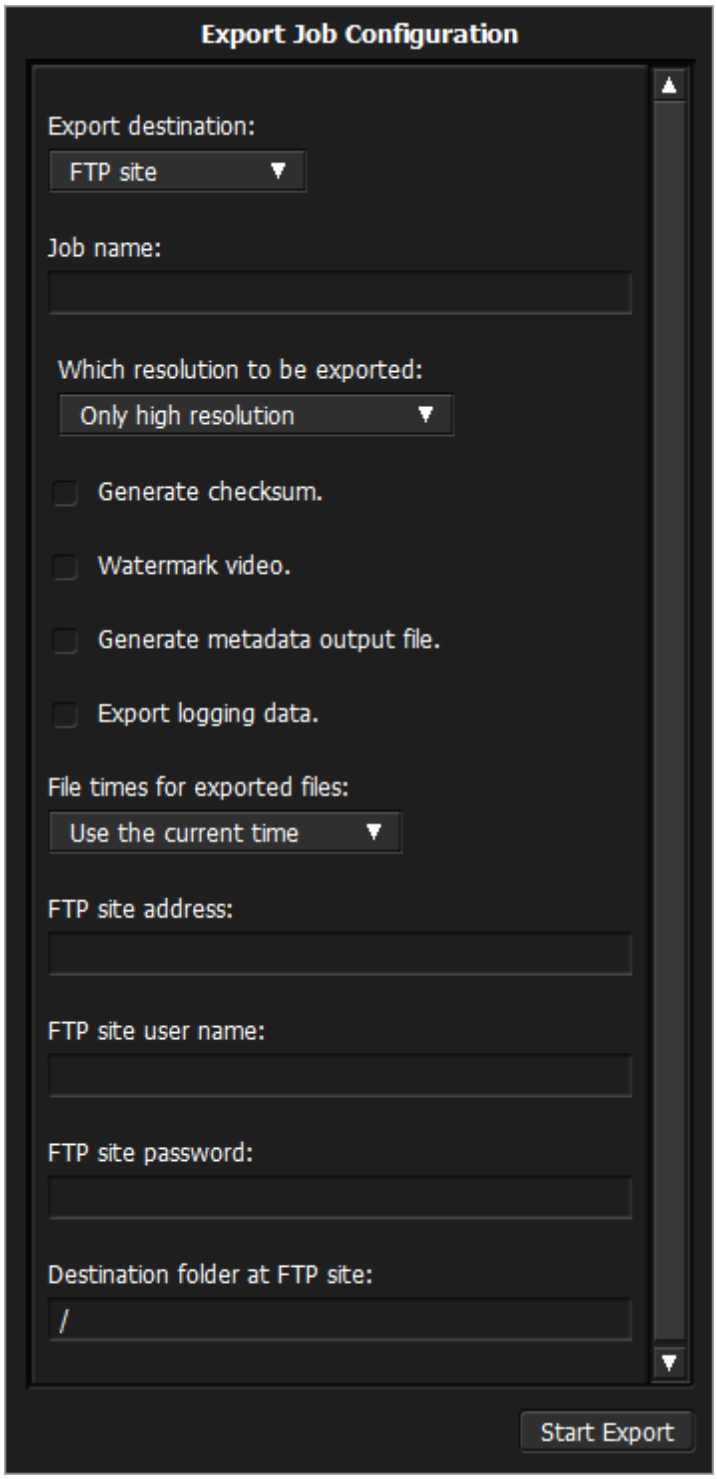

Element	Description
Export destination	Define where files are exported to. (Export to FTP site.)

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Element	Description
	This option is only available when it is enabled in your User Preferences.
Job name	Type a job name to associate a text name with the job. This name appears in job logs.
Which resolution to be exported	Choose which resolution of the asset is to be exported. From the drop-down list, choose **Only high resolution**, **Both high and low resolution**, or **Only low resolution**.
Generate checksum	Select to generate a checksum file for each exported asset file. The checksum (or digital fingerprint) is calculated using the SHA256 hash algorithm. The resulting filename is the original base name with a .sha256 extension.
Watermark video	Select to apply a watermark to the exported video file. When this item is selected, the pane expands to show additional fields. This is only available for video files. **Placement** - Specify where the watermark should be placed in the video. Select from center, upper left, upper right, lower left and lower right. **Type** - Specify the type of watermark to be applied. If **Text**, then there are fields displayed to input the text size, text color, and the actual text to be used as the watermark. If **Bitmap**, then a box displays where the pathname of a watermark file can be entered, or click the **Browse** button to browse for the watermark file. When using QuickTime as the backend to watermark a video, the preferred format for a watermark file is Portable Network Graphics (.png extension). If you use a bitmap (.bmp) file, the watermark image will not be transparent and it will be surrounded by a white box covering up part of the video. No watermark can be added to audio files.
Generate metadata output file	Generate metadata xml files for output along with asset. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**.

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Element	Description
	• **Create multiple files** - The metadata file has the same name as its associated asset file, but with the .xml extension. One metadata file per asset is created and they stick together. • **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. At a minimum the data included contain pathname, file id, size, and the date and time modified
Export logging data	Generate an XML formatted file with the contents of the log entries associated with the video clip(s) and image(s) that are to be exported. The resulting filename is the original base name with the extension _lgg.log.
FTP site address	Type the host name or address.
FTP site user name	Type the user name to log into the FTP site.
FTP site password	Type the password to log into the FTP site.
Destination folder at FTP site	Type the destination path and directory the files should be exported to. This directory is a place to store files.

Custom

You can customize export options for **Export Job Configuration**. Custom options listed below Export logging data are only example fields and were set up using an ExportExtensions.cfg file. Custom options are available only when an ExportExtensions.cfg file is in place.

Available options are customizable via ExportExtensions.cfg at <install-dir>\Program Files\Phoenix\Config.

For more information see ExportExtensions.cfg.

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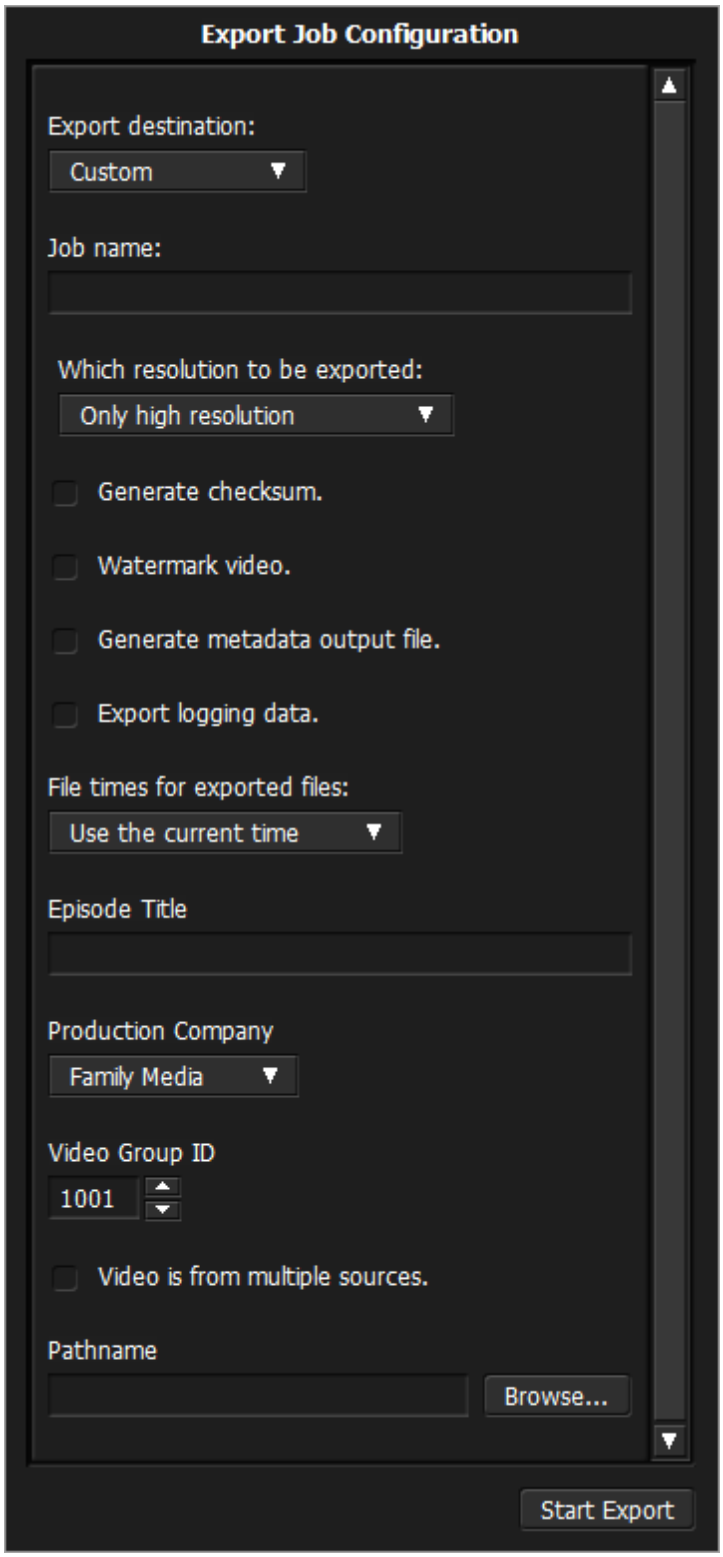
Export Job Configuration
Export destination:
Custom
Job name:
Which resolution to be exported:
Only high resolution
Generate checksum.
Watermark video.
Generate metadata output file.
Export logging data.
File times for exported files:
Use the current time
Episode Title
Production Company
Family Media
Video Group ID
1001
Video is from multiple sources.
Pathname
Browse...
Start Export

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Element	Description
Export destination	Define where files are exported to. (Custom option.)
Job name	Type a job name to associate a text name with the job. This name appears in job logs.
Which resolution to be exported	Choose which resolution of the asset is to be exported. From the drop-down list, choose **Only high resolution**, **Both high and low resolution**, or **Only low resolution**.
Generate checksum	Select to generate a checksum file for each exported asset file. The checksum (or digital fingerprint) is calculated using the SHA256 hash algorithm. The resulting filename is the original base name with a .sha256 extension.
Watermark video	Select to apply a watermark to the exported video file. When this item is selected, the pane expands to show additional fields. This is only available for video files. **Placement** - Specify where the watermark should be placed in the video. Select from center, upper left, upper right, lower left and lower right. **Type** - Specify the type of watermark to be applied. If **Text**, then there are fields displayed to input the text size, text color, and the actual text to be used as the watermark. If **Bitmap**, then a box displays where the pathname of a watermark file can be entered, or click the **Browse** button to browse for the watermark file. When using QuickTime as the backend to watermark a video, the preferred format for a watermark file is Portable Network Graphics (.png extension). If you use a bitmap (.bmp) file, the watermark image will not be transparent and it will be surrounded by a white box covering up part of the video. No watermark can be added to audio files.
Generate metadata output file	Generate metadata xml files for output along with asset. If selected, a drop-down list appears for you to select **Create multiple files** or **Create a single file**. • **Create multiple files** - The metadata file has the same name as its associated asset file, but with the .xml extension. One metadata file per asset is created and they stick together.

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Element	Description
	• **Create a single file** - A single file containing the metadata for all files being exported is generated. A Metadata output file box appears, requiring a name for the metadata file. Click the **Browse** button to select. At a minimum the data included contain pathname, file id, size, and the date and time modified
Export logging data	Generate an XML formatted file with the contents of the log entries associated with the video clip(s) and image(s) that are to be exported. The resulting filename is the original base name with the extension _lgg.log.
Argument <1 - 8>	These fields are defined in ExportExtensions.cfg by your Phoenix DEM administrator. Consult your Phoenix DEM administrator for details. The image above displays the arguments from a sample ExportExtentions.cfg file. • Blank fields are ignored. • If typing a number into a spin control manually, press TAB or ENTER for the new number to take effect.

After setting the parameters, click **Start Export** to export assets. A job status box appears in the Job Status pane during the job, and the **Stop** button is active.

If you click **Stop** while it is exporting files, not all of the files in the Export Queue are exported. Any files that have completed export remain on the target computer. Click **Dismiss** to close the job status box.

Click **View** to open a log file for job details or to diagnose export issues.

Problems with exporting assets?

Existing files on networked computers are not overwritten, by default. If an export job is unsuccessful, there may already be a copy of the files on the target computer. Avoid errors by setting additional export parameters. For example, to overwrite files on a networked computer, from the **When to overwrite existing files** field, select **Always** or **Only if newer**.

- Ensure that the files to overwrite are not write protected by the operating system on the targeted computer.
- From the **When to overwrite existing files** field in the Export Job Configuration pane, select **Always**.
- Click **Start Export** to retry exporting assets.

For more information see Search Digital Evidence and Digital Evidence Manager.

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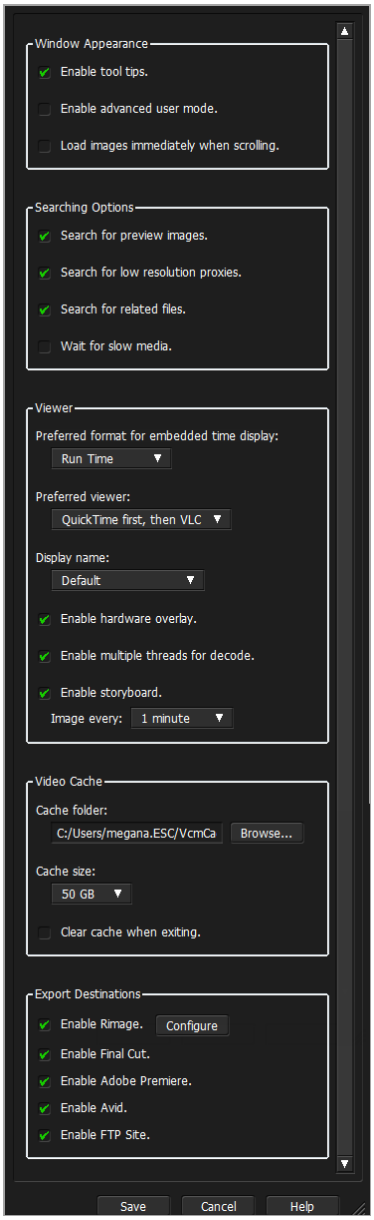
DEM User Preferences

Use the Digital Evidence Manager User Preferences to define default settings for the **Search** and **Export** tabs of the Digital Evidence Manager.

Access the Digital Evidence Manager User Preferences from the Digital Evidence Manager **Tools** menu, select **User Preferences**.



Digital Evidence Manager User Preference Elements

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Group	Element	Description
Window Appearance	**Enable tool tips**	A check mark by this element indicates that tool tips for the Digital Evidence Manager display. De-select to turn tool tips off.
	Enable advanced user mode	Select to view advanced information such as run time, size, and frame size in the Search Results pane for each video clip. This advanced information may not be visible depending on the version of your software.
	Load images immediately when scrolling	When checked, thumbnail images are loaded as you scroll down the Search Results pane. If de-selected, thumbnail images load only when scrolling stops.
Searching Options	**Search for preview images**	Search the ingest server for preview images to perform an exhaustive search and return all preview images.exhaustive search and return all preview images. Select all three search options to ensure that all files are found. Searches with multiple search options selected can be time intensive because several passes through the ingest server are taking place.
	Search for low resolution proxies	Search the ingest server for low resolution proxies to perform an exhaustive search and return all low resolution proxy videos. Select all three search options to ensure that all files are found. Searches with multiple search options selected can be time intensive because several passes through the ingest server are taking place.
	Search for related files	Search the ingest server for related files to perform an exhaustive search and return all related files (including high resolution originals, preview images, low resolution proxy videos, and any other related files in the Information Repository).

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Group	Element	Description
		Select all three search options to ensure that all files are found. Searches with multiple search options selected can be time intensive because several passes through the ingest server are taking place.
	Wait for slow media	The application will try to retrieve thumbnail images, event entries, logging entries, and other display-related files from slow media, *i. e.* tape. Search results will be slow. Thumbnails only exist on tape or other slow media.
Viewer	**Preferred format for embedded time display**	Select the type of time code that displays in the Media Viewer.
	Preferred viewer	Select the type of video viewer to drive the play back of videos. The orders to use the media player are: **VLC first, then QuickTime** , **VLC only**, **QuickTime first, then VLC**, or **QuickTime only**. To play back videos in Phoenix DEM, you can use the supplied media player (VLC) or Apple QuickTime free or Pro on your computer. See Hardware and Software Requirements for the latest information. Be sure to restart any viewer that is running if you change the preferred viewer.
	Display name	Select the display name that will appear when the search results are displayed in the Sear Results pane of the Digital Evidence Manager. • **Default -** The filename.

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Group	Element	Description
		• **A Custom Metadata Value -** Choose to have the display name be a custom metadata value that was already defined (such as Episode Title or Production Company).
	Enable hardware overlay	Select to enable the ability to render video directly. If disabled, remote desktop or shared desktop view may not work correctly for viewing live video streams.
	Enable multiple threads for decode	Select to be able to use multiple threads and multiple cores for decoding to provide faster decoding of the video. If decoding is not occurring properly, disabling this feature may fix the problem.
	Enable storyboard	Select to display a storyboard strip in the Media Viewer. The storyboard displays still images from the video at specified time intervals. Click an image to jump to that point in the video. Set the time interval to display a still image from the video in the storyboard. By default, an image is displayed each minute, but also select to have an image displayed at 15 second, 30 second, 2 minute, and 5 minute intervals.
Video Cache	**Cache folder**	Define the folder where Phoenix DEM caches search results. Similar to the cache of a web browser, the cache stores found thumbnails, low resolution proxy videos, and other associated files and enables you to replay already found videos more quickly. Click the **Browse** button to browse for a folder.
	Cache size	Define the size of the cache where Phoenix DEM caches thumbnails, low resolution proxy videos, and associated files. When full, contents overwrite in the order of oldest to newest.

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Group	Element	Description
		If unsure about cache size, leave it set to the default value. If you find that Phoenix DEM often needs to retrieve videos from storage rather than from the cache, increase the cache size.
	Clear cache when exiting	Select for Phoenix DEM to empty the cache when the application closes.
Export Destinations	**Export Destinations**	Only the export destinations available for the application are displayed. Depending on your product, you may see options to: • **Enable Rimage.** - Select to enable the **Configure** button. Use the Rimage Export Configuration window for configuring Rimage to publish video files. (See the following section.) • **Enable Final Cut.** • **Enable Adobe Premiere.** • **Enable Avid.** • **Enable FTP Site.** The options selected are then displayed on the **Export** tab > Export Job Configuration pane > in the **Export Destination** drop-down list. The Local File System selection is always available.
Save		Save your settings.
Cancel		Close the window without saving modifications.
Help		Open help.

For more information see Digital Evidence Manager, Search and Export, and Media Viewer and Logging.

Rimage Configuration window

Configure for Rimage export using the Rimage Configuration window. This process enables you to export or save files to a Rimage system.

Access the Rimage Configuration window from the User Preferences window. Under **Export Destination**, select **Enable Rimage**, and then click the **Configure** button.

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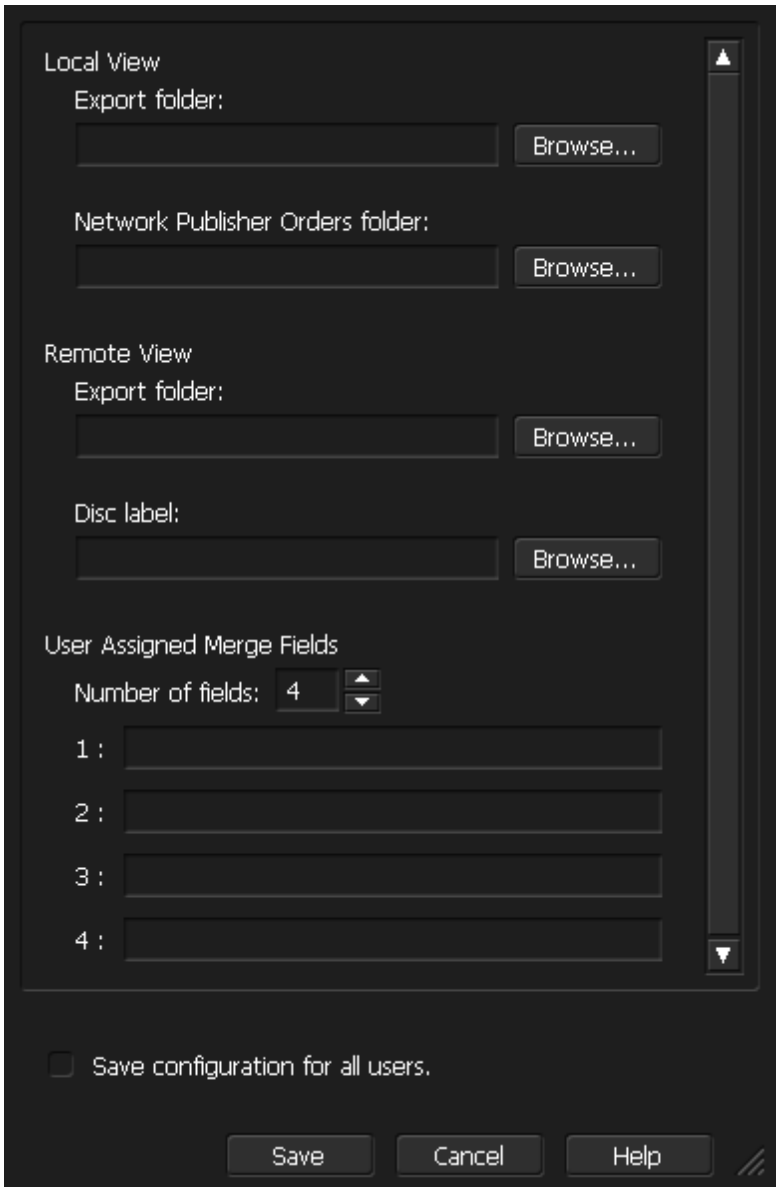

Element	Description
Local View: Export folder	The view of the export folder on the Phoenix DEM client computer from the client computer. The client computer refers to the computer where Phoenix DEM is running. • Type a path for a folder or click the **Browse** button to navigate to a folder.
Local View: Network Publisher Orders folder	The Network Publisher Order Files folder is on the Rimage computer. This is the Phoenix DEM client computer's view of the export folder on the Rimage computer. The client computer refers to the computer where Phoenix DEM is running.

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Element	Description
	• Type a path for a folder or click the **Browse** button to navigate to a folder.
Remote View: Export folder	The view of the export folder on the Phoenix DEM client computer from the Rimage computer. This is the export folder on the client computer where Phoenix DEM is running. • Type a path for a folder or click the **Browse** button to navigate to a folder. The path indicates how this folder is viewed by the Rimage system.
Remote View: disc label	The client computer's view, where Phoenix DEM is running, of the path where Rimage gets the label file for the discs to be burned. For Phoenix DEM to interact with the disc label that Rimage uses when creating discs, the disc label must already be created.
User Assigned Merge fields: Number of fields	The number of user defined fields (0 - 30). Use these fields to add label merge text to the label that is used for your media. Every field defined here is added to the Export Job Configuration pane, where you can define the contents of each field. If you type a number manually, you must press TAB or ENTER for the new number to take effect. Ensure that the fields entered match the fields on the disc label that Rimage uses. If the fields do not match, disc labels do not print correctly.
Save configuration for all users	Select to keep the same values for all logged-in users who use Phoenix DEM on the current computer.

When done with the settings, click **Save**. The **Rimage** option is activated in the Export Job Configuration pane under **Export Destination**.

To export to Rimage, make sure the required Rimage system folders are in place and system permissions are set correctly.

As illustrated in the diagram below, when an Export job is executed, Phoenix DEM sends data to the Export folder on the local system and an Order file to the Network Publisher Order Files folder on the Rimage computer. Rimage takes care of the rest. In the diagram, the label file resides on the Rimage computer, but it can easily reside on any networked computer that Rimage has access and security permissions to.

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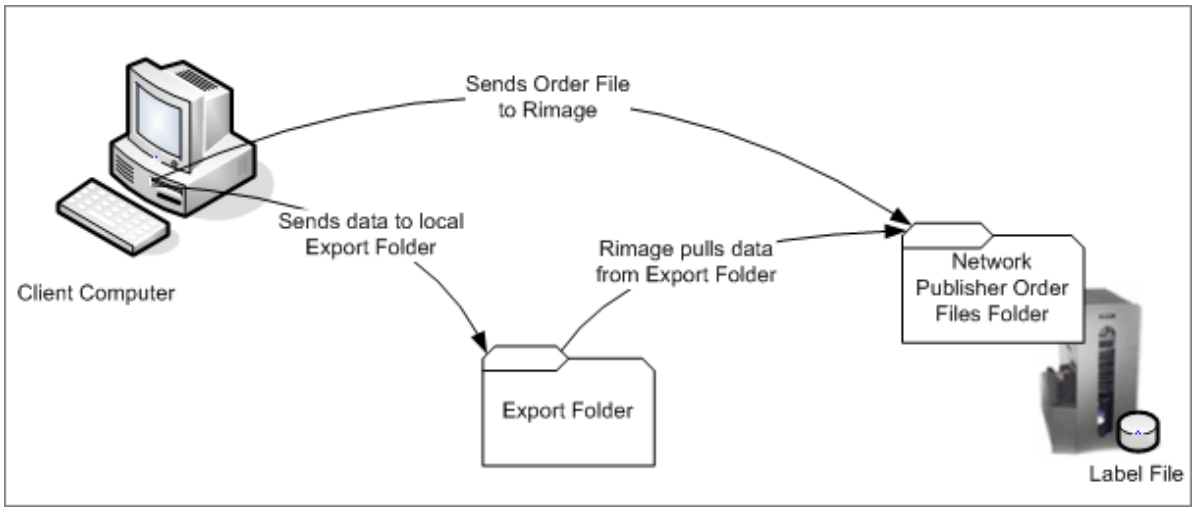

Folder Access and Permissions Settings

To enable Rimage Export functionality, the Rimage Network Publisher must be installed and running on the network, and the Rimage Orders folder must be visible from the computer where Phoenix DEM is running. Check the following:

- There is a Rimage export folder on the Phoenix DEM client desktop computer.
- Phoenix DEM users have write access to the export folder and Rimage has at least read permissions.
- Security is set for domain users to have full control.

For more information see Export Digital Evidence.

Data Management

SoleraTec's Phoenix DEM is the ultimate data management tool, providing automated digital asset management for Windows, Mac, and Linux environments. The Data Services Service is the engine that manages all the data within your Information Repository.

From data and video ingest all the way to storage, Phoenix DEM stands out among other data management systems because your data assets are under complete control and quality is preserved. The Data Services Service delivers the peace of mind that data and video from yesterday or five years ago that is stored in the Information Repository can be searched, played back, and exported to any desktop on the network at any time.

Through creating a Data Service Policy, the Data Services Service performs duties such as migrating, replicating, and purging data between Vaults, and the overall management of data, video, and supports file movement to other Vaults on the network.

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The migration, replication, and purging of data is key to Phoenix DEM because those functions allow for a very scalable solution. Many types of storage devices may be used with Phoenix DEM and can be added as you need them. This proves to be cost effective and even more scalable for long-term retention with this multi-tiered architecture.

Since the Data Services Service manages the data between Vaults within the Information Repository, it is the Locator Service that tracks which Vaults on the network are active.

The product architecture proves advantageous with the following:

- **Load Balancing** - You can mark a specific storage pool as part of the destination criteria for jobs. The clients locate the Vault(s) that contain the designated storage pool and stores the defined files to it. If there are multiple Vaults with media belonging to the storage pool defined for the initial job, clients pick the one with the most available free space on it. This keeps the entire Information Repository load balanced.

- **Complete and Accurate Stored Files** - As a job is running, the completeness and accuracy of the stored files are constantly being verified. Most other products that perform data verification read data from the media piece and compare it to the original data on the client computer. This method is resource intensive and time consuming. Phoenix DEM uses a cyclic redundancy check (CRC) as the files are written to storage media.

If an error occurs while running jobs that prevents files from being processed, clients add the files to an internal retry list. At the end of the job, the client retries to process the files that failed on the first pass. If it fails during the retry session, the failure is logged to a retry file and report and is included in the Information Repository's error logs. When a subsequent job starts, the system looks for the retry file, and the files slated for retry are added with first priority to the list of files to be captured.

Workflow - Data Service Policy

An intricate part of data management is working with Data Service Policies. The following steps supply an overview look at the data management workflow:

1. From your suite of product applications, open the Data Service Policy application (DataSvcPolicies.exe). For further explanation of how to launch applications using different operating systems, see Getting Started.

2. If a policy does not open by default, you need to create a policy. Before you can set parameters and initialize the process, a policy must be created and opened.

3. From the Data Service Policy window, select the Source tab to identify a Vault, media, or storage pool to migrate, replicate, or purge files.

4. From the Data Service Policy window, select the Criteria tab to designate files to migrate, replicate, or purge. Within this tab, you can also add file and directory filters.

5. From the Data Service Policy window, select the Destination tab to specify where the files are to be migrated or replicated to.

6. From the Data Service Policy window, select the Scheduling tab to define job occurrences. By default, Data Service Policies are not scheduled to run.

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7. From the Data Service Policy window, select the Advanced tab to set options such as pre-processing and post-processing commands, log output location, connection sharing, and throttling.

8. Click the **Save** icon to start the policy.

Data Service Policies

Use Data Service Policies to create parameters for complete data lifecycle management in the Information Repository. The service provides an easy way to move, copy, and delete data while preserving data quality and making sure it is maintained on media within a storage hierarchy that continually meets performance and storage longevity requirements of each different type of data within an enterprise.

Once data is in the Information Repository, use Data Service Policies to control which files are affected during a job to migrate, replicate, or purge. The policies also control when a job starts, where files are stored, how often a job runs, when it stops, and all other aspects of the job. Initial and subsequent storage devices do not have to be of the same technology, so configurations can be built to include anything, for example, disk to tape (D2T), or disk to disk to tape (D2D2T). Other Phoenix DEM policies run on the computer where they are created, but the Data Service Policies created affects the entire Information Repository. All Data Service Policies display and can be edited in any instance of the Data Service Policy application.

Data Service Policies take on many different forms, being broad or narrow. A single Vault can contain any number of policies that can span through multiple sites.

The following three actions are all it takes for effective data management across multiple tiers of storage. Each policy created will have one of these actions assigned to it. No two policies can have the same name.

- **Migrate** - Move files or video from one Vault to another Vault. Use migrate to move data into another Vault that may have more space available, or have better performance, or move unnecessary and older data offline completely.
- **Replicate** - Copy multiple instances of stored files that can be accessed for retrieval. Use replicate to copy data into a storage device or to share the data with another network.
- **Purge** - Remove data that is no longer needed, or use as a way to keep Vaults uncluttered and clear. The policy manages the scheduled purge.

The Data Services Policies window displays all of the Data Service Policies implemented across the Information Repository on the network. Consequently, if two or more users attempt to modify a policy simultaneously, a conflict occurs and only the changes by one are saved.

Data Service Policy Management

Create a Policy

The first thing to do before working with Data Services is to create a policy. A policy has options to set for your data management needs and the policy you create determines how the Data Services Service component of Phoenix DEM manages data across your system.

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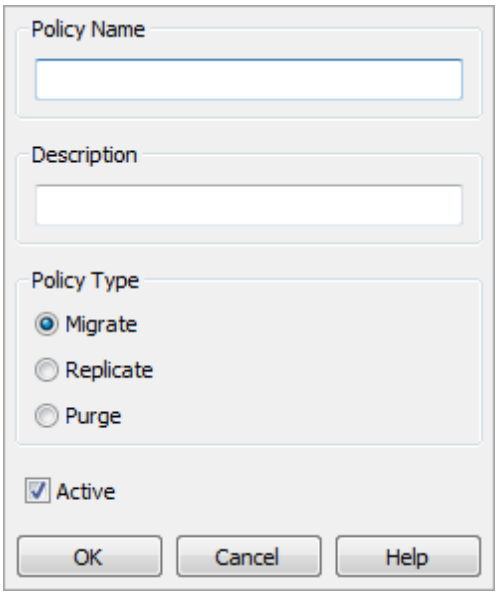
1. From your suite of product applications, open the Data Service Policies application (DataSvcPolicies.exe).

2. From the Data Service Policies window, click the plus symbol to create a new policy.



3. Type a **Policy Name** for the new policy.

4. Type a **Description** of the new policy for quick reference.

5. Select a **Policy Type**.

6. Select the policy as active, or de-select the **Active** checkbox if you do not want the policy to run. When the **Active** checkbox is de-selected, the triangular caution symbol is superimposed over the policy in the Data Service Policy window **Policy Name** pane.

7. Click **OK**. The window closes, and the policy name, description, and host appear in the **Policy Name** pane.

8. (Optional) Modify the parameters as needed on each Data Service Policy window tab for the policy. See the subsequent sections for details.

9. From the Data Service Policy window, click **Save** to keep all policy settings and implement the policy.

Modify a Policy

Use to change a policy's name, description, and type of policy, as determined when creating a policy. Make one modification or change all controls.

1. Double-click the policy name in the Data Service Policy window **Policy Name** pane.

2. (Optional) Type a new name in the **Policy Name** text box.

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3. (Optional) Type a modified description in the **Description** text box.
4. (Optional) Select a **Policy Type**:
5. (Optional) Select the policy as active, or de-select the **Active** checkbox if you do not want the policy to run.
6. Click **OK** to accept modifications, and the window closes.
7. (Optional) Modify the parameters as needed on each Data Service Policy window tab for the policy. See the subsequent sections for details.
8. From the Data Service Policy window, click the save icon to keep all policy settings and implement the policy.

To modify a policy's parameters see the corresponding Data Service Policy window tab.

Create a Policy and Modify a Policy Elements

Elements	Description
Policy Name	The name typed here becomes the name of the new Data Service Policy.
Description	Text box to type a short description about the policy. The description should tell you something about the policy so you know what it does without having to open it.
Policy Type	Select between Migrate, Replicate, and Purge. **Migrate** - Set the policy up to move files from one location to another - one Vault to another Vault. Once the data is safely moved, the original stored copy is deleted immediately. When migrating from data tape media, files are marked as deleted, but are not actually deleted until the media is reused and files are overwritten. This enables migration jobs to finish in a timely manner. **Replicate** - Set the policy up to copy files from one location to another - one Vault to another Vault. Retains the original stored copy. **Purge** - Set policy to permanently delete files from a Vault within the Information Repository.

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Elements	Description
	Data Tape - When you select Purge for files on data tape media, a flag is logged in the database log index indicating deleted files. However, the files are not actually removed from the data tape until you run Erase Selected Media where media is reused and files are overwritten. Hard Disk - Files on hard disk media are purged immediately.
Active	Select to make the policy active, and de-select to make the policy not active. If not active, a triangular caution symbol appears over the policy in the Data Service Policies window **Policy Name** pane alerting you to this condition.

Delete a Policy

You can delete a policy that no longer meets your needs, or you can de-activate a policy and then re-activate it at a later time if needed.

Delete a Policy:

1. From the Data Service Policies window **Policy Name** pane, click the policy to delete.
2. Click the **Delete** button .
3. After deletion of a policy, the Data Services Service has been modified. Click the **Save** button to save the updated Data Service Policies settings.

If you delete a policy while a job is running, the job stops as soon as it is finished processing the current file.

Make an Active Policy Inactive:

1. From the Data Service Policy window **Policy Name** pane, double-click the policy.
2. In the **Modify Selected Policy** window, de-select the **Active** checkbox.

Import/Export Data Service Policies

Policy import and export functionality offered by SoleraTec's Phoenix DEM allows you to save policies, restore policies, and copy sets of policies from one computer to another. After creating a set of policies, you can export them to a policy file. Then, at a later time, if you want to re-implement the set of policies or

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implement them for the first time on another computer, they are there for import.

Use the import and export functionality to take a snapshot of the working policy configuration, bring new computers online, test different policy configurations, or restore user corrupted policy configurations.

By default, Target and Process policies are exported to **TgtProcSvc.cfg**. Data service policies are exported to **DataSvcsSvc.cfg**.

Although each policy editor uses only one policy set at a time, multiple policy sets exported to policy files can be used. Create, name, and use any file naming convention for policy files, and be sure to keep track of where policies are exported to if it is a location other than the default location (the user's home directory).

Before restoring a set of policies to a computer that currently has policies set up, be sure to delete all of the current policies before importing other policies - otherwise imported policies are added to current policies.

Although Target and Process policies that ingest data from Microsoft Exchange Server can be created and run on only Windows computers, Exchange Server policies can be imported to, modified on, and re-exported from Linux and Mac computers.

Data Service Policies are incompatible with other client policies and vice versa. If you try to import a Data Service policy into a non-Data Service Policies client (or vice versa), an error message appears and no policies are added.

Import Policies

When importing policies, they are added to the policies that are already in the policy editor.

1. From the application's main menu (or policy editor), click **File** > **Import from**. The Import from window appears.
2. If you are not importing policies from your local computer, navigate to the networked computer that contains the policies that you need.
3. Select the policy file that contains the policies that you want to use.
4. Click **Open**. The policies in the configuration file are implemented.

Export Policies

1. Create policies.
2. From the application's main menu (or policy editor), click **File** > **Export to**. The Export to window appears.
3. To save your policies with the default policy file name, click **Save** without entering a new file name. Or, enter a new name In the Export to window, and then click **Save**.

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Import/Export Policy File Structure

An exported policy file is block structured but free from any column or order formatting. The tokens listed below specify job criteria. By default, policy files are exported to and imported from <install-dir>/Config/DataSvcsSvc.cfg.

Files that contain policies are formatted as follows. Each policy is a single block. The beginning of each block is indicated by policy_name="<policy name>".

```
policy_name="<policy name>"
[
    <token>=<value>
    <token>=<value>
    . . .
]
policy_name="<policy name>"
[
    <token>=<value>
    <token>=<value>
    . . .
]
. . .
```

Token/Value Pairs

A token is a job attribute that is given a value that determines how the job runs.

Token/Value	Description
absolute_start = <*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	The exact start time and date that the job is to run. Multiple absolute start tokens may be entered.[1, 2]
active = <*boolean*>	Define if the policy is active or inactive.[2] Valid values = true | false Default = true
complete = <*boolean*>	Print all summary information plus the path names of the files migrated to the file indicated by the list_pn option. Valid values = true | false Default = false
content_filter = "<*character string*>"	A word or phrase in the file to be processed. Default = ""

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Token/Value	Description
data_paths = <*number*>	The maximum number of concurrent files permitted to be sent during a job. Default = 1
deleted_files = <*boolean*>	Include files tagged for deletion. Valid values = true | false Default = false
description = "<*character string*>"	A description of the policy.[2] Default = ""
diag = <*boolean*>	Print diagnostic information to the path indicated in the list_pn option. Valid values = true | false Default = false
dir_spec = "<*pathname*>"	Directories to include. Multiple dir_spec options can be specified. The dir_spec check is made for every directory found. This includes the directories contained in the path name list that the job traverses. Default = "*" (any)
display_only = <*boolean*>	Search for target files without processing them. List the files that would have been processed. Valid values = true | false Default = false
dst_media_name = "<*character string*>"	The destination media name. If not specified, the first available unit of media is used. Default = "*" (any)
dst_media_speed = <*character string*>	The destination media to be used according to media speed. Valid values = • S0 - S10 • Unspecified Default = Unspecified

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Token/Value	Description
dst_media_type = <*character string*>	The destination media type to be used. Valid Values = • Hdisk - hard disk • 8mm - Eight-millimeter tape • Dds - Digital data storage • Dlt - Digital linear tape • Ait - Advanced intelligent tape • SuperAit - Super advanced intelligent tape • Vxa - Exabyte VXA tape • Travan - Travan tape • Lto - Linear tape open • MagOptical - Read/write optical • Unspecified Default = Unspecified
dst_storage_pool = "<*character string*>"	Specify the name of the destination storage pool to be used. Use "" for no storage pool name. Default = "*" (any)
dst_vault_name = "<*character string*>"	Specify the destination vault to be used. Default = "*" (any)
dst_volume_format	Internal use only.
dst_volume_name	Internal use only.
dst_volume_pack	Internal use only.
dt_access = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	Process files based on the accessed date and time. Valid values = • AO (Absolute Old) – Select files with a dtu (date_time_use) equal to or before the specified date. Enter the year as a 4-digit number.

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Token/Value	Description
	• AN (Absolute New) – Select files with a dtu equal to or after the specified date. Enter the year as a 4-digit number. • RO (Relative Old) – Select files with a dtu equal to or before the relative specified date. • RN (Relative New) – Select files with a dtu equal to or after the relative specified date. • I (Inactive) – Do not use date. Default = I
dt_stored = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	Process files based on the date and time stored on the Vault. Valid values = • AO (Absolute Old) – Select files with a dtu (date_time_use) equal to or before the specified date. Enter the year as a 4-digit number. • AN (Absolute New) – Select files with a dtu equal to or after the specified date. Enter the year as a 4-digit number. • RO (Relative Old) – Select files with a dtu equal to or before the relative specified date. • RN (Relative New) – Select files with a dtu equal to or after the relative specified date. • I (Inactive) – Do not use date. Default = I
erase_media_if_unref = <*boolean*>	Erase the media when all the files on the media are marked for deletion. Valid values = true | false Default = false
error_log = "<*pathname*>"	The path for the error log file. If you specify "/dev/tty", error messages display on the default output device. Supports token substitution.[2] Default path for the configuration file = "%R/Logs/%P.err"

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Token/Value	Description
exclude_dir_spec = "<*pathname*>"	Omit directories. Accept multiple instances. Default = "" (no directories excluded)
exclude_file_spec = "<*pathname*>"	Omit files. Accept multiple instances. Default = "" (no files excluded)
file_spec = "<*pattern*>"	Files to be processed. This token/value pair can be specified multiple times to include multiple file filters. Default = "*" (any)
hostname = "<*host name*>"	Select the files that are to be processed based on the original host name for the file. Default = ""
include_offline = <*boolean*>	Process files from offline media. Valid values = true | false Default = false
job_type = <*alpha*>	Specify the job type. Valid values = • replicate • migrate • purge Default = migrate
list_pn = "<*pathname*>"	The filename where all report information is written. Supports token substitution. Default path for the policy file = "%R/Logs/%P.log"
max_file_size = <*number*>	The maximum size in bytes of a source file. The min_file_size and max_file_size options are mutually exclusive. Default = 18446744073709551615
min_file_size = <*number*>	The minimum size in bytes of a source file. The max_file_size and min_file_size options are mutually exclusive.

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Token/Value	Description
	Default = 0 (none)
out_of_band = <*boolean*>	Enable the application to constantly monitor its processes and select the network transmission protocol that best suits the files being processed. Valid values = true | false Default = true
post_proc_cmd = "<*command*>"	A command that runs immediately after the job is finished. Supports token substitution. Default = ""
pre_proc_cmd = "<*command*>"	A pre-process command that runs immediately before a job starts. Supports token substitution. Default = ""
process_directories = <*boolean*>	Directories will be processed. Valid values = true | false Default = true
process_files = <boolean>	Files will be processed. Valid values = true | false Default = true
repeat_interval = <*hh:ss:mm*>	The amount of time that elapses before a job is repeated.[1, 2] Default = 24:00:00
src_high_water_mark = <*number*>	The maximum percent (%) of media that is to be used. If the % used is greater than the entered value, the file is processed. Valid values = 1 - 100 Default = 0
src_low_water_mark = <*number*>	The minimum percent (%) of media used after the high watermark has been reached. If the % of media used is greater than this value and the high watermark has been reached, the file is processed. Valid values = 1 - 100

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Token/Value	Description
	Default = 0
src_media_name = "<*character string*>"	The source media name. Default = "*" (any)
src_media_speed = "<*character string*>"	The source media speed. Valid values = • S0 - S10 • Unspecified Default = Unspecified
src_media_type = "<*character string*>"	The source media type from where the file should be processed. • Hdisk - Hard disk. • 8mm - Eight-millimeter tape. • Dds - Digital data storage. • Dlt - Digital linear tape. • Ait - Advanced intelligent tape. • SuperAit - Super advanced intelligent tape. • Lto - Linear tape open. • Vxa - Exabyte Vxa tape. • Travan - Travan tape. • MagOptical - Read/write optical. • NullDevice • Unspecified Default = Unspecified
src_storage_pool = "<*character string*>"	The source storage pool. Default = "*" (any)
src_vault_name = "<*character string*>"	The source vault name. Default = "*" (any)
src_volume_format	Internal use only.

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Token/Value	Description
src_volume_name	Internal use only.
src_volume_pack	Internal use only.
start_days = <*mtwtfss*>	The days the job is to run. Use **-** to indicate days the job should not run. For example, if the job is to run on Thursday, you would enter ---t---.[1, 2] Default = mtwtfss
start_time = <*hh:mm:ss*>	The time the job should start for each defined start day in start_days.[1, 2] Default = 0:0:0 (midnight)
stop_time = R<*yyyy*>/<*mm*> /<*dd*>-<*hh*>:<*mm*>:<*ss*>	The date and time the job is to stop. The date and time entered is relative to the start of the job.[2] Default = R0000/00/00-00:00:00 (no stop time)
summary = <*boolean*>	Print the start and stop times and final statistics of the job to the file indicated by the list_pn option. Valid values = true | false Default = true
throttle = <*number*>	The throttle controls the amount of bandwidth used by jobs (and, the speed files are sent to Vaults). Throttle values are relative to Information Repository capacity and range from 1% to 100%. A lower setting reduces the amount of available bandwidth that is used. Valid values = 1 - 100 Default = 100
type = <*alpha*>	The policy type of the policy file. Default = "ds"
vcs = <alpha><*number*>	Specify the number of files (F) or number of bytes (S) to store per single Vault connection. Valid values = • F – files • S – bytes

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Token/Value	Description
	• 1 - ∞ Default = F500
version = "<*number*>"	The version number of the policy. The current version number is 1.0.[2]
volume_use	Internal use only.

[1]**Note:** Timing tokens are mutually exclusive. Only one timing token may be set. In other words, you may set either absolute_start, or repeat_interval, or start_days and start_time.

[2]**Note:** Token/Value pair is used for policy only.

Sample Data Service Policy

If you were to export a policy, it would look similar to the following:

```
#
# Start of object rule for policy name
'Virtualization2LongTerm'
#
policy_name = "Virtualization2LongTerm"
[
    type                    = "ds"
    description             = ""
    version                 = "1.0"
    active                  = false
    complete                = false
    process_files           = true
    process_directories     = true
    content_filter          = ""
    data_paths              = 1
    deleted_files           = false
    diag                    = false
    display_only            = false
    dst_vault_name          = "*"
    dst_media_name          = "*"
    dst_storage_pool        = "LongTerm"
    dst_media_speed         = Unspecified
    dst_media_type          = Unspecified
    dst_volume_format       = Unspecified
    dst_volume_name         = "*"
    dst_volume_pack         = ""
    dt_access               = I
    dt_stored               = I
    error_log               = "%R/Logs/%P.err"
    hostname                = ""
```

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```
      include_offline          = false
      job_type                 = "migrate"
      list_pn                  = "%R/Logs/%P.log"
      min_file_size            = 0
      max_file_size            = 18446744073709551615
      src_vault_name           = "*"
      src_media_name           = "*"
      src_storage_pool         = "Virtualization"
      src_media_speed          = Unspecified
      src_media_type           = Unspecified
      src_volume_format        = Unspecified
      src_volume_name          = "*"
      src_volume_pack          = ""
      volume_use               = Unspecified
      out_of_band              = true
      post_proc_cmd            = ""
      pre_proc_cmd             = ""
      repeat_interval          = 00:00:20
      src_high_water_mark      = 80
      src_low_water_mark       = 80
      stop_time                = R0000/00/00-00:00:00
      summary                  = true
      throttle                 = 100
      vcs                      = F500
  ]
```

Data Service Policies Window

The Data Service Policies window is divided into two main panes. The left pane provides an overview of all of the Data Service Policies in the Information Repository noting the policy name, type and description. The right pane consists of the Source, Criteria, Destination, Scheduling, and Advanced tabs to populate when creating a policy.

Use the Data Service Policies toolbar to create a new policy by clicking the **Add** button. The toolbar consists of the following buttons:

- Save all policy settings.

- Add a new policy.

- Delete the selected policy.

- Refresh the view for the latest version of each policy to display. Since Data Service Policies are implemented across the whole Information Repository, refreshing is important to do to get the latest updates for the Data Service Policies view. Also, it refreshes for changes that could affect contents of Vaults, media names, and storage pools. Before you refresh, save. If you do not save, any changes made or added policies will be lost.

The Data Service Policies window is described below:

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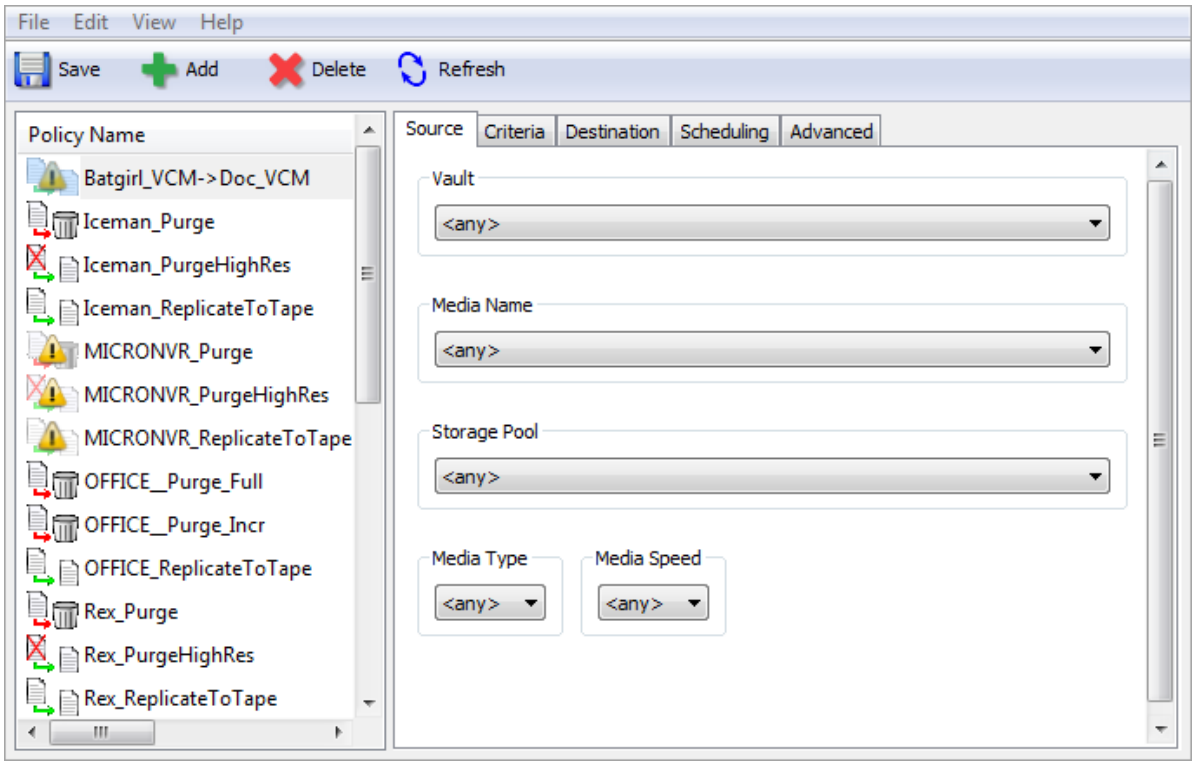
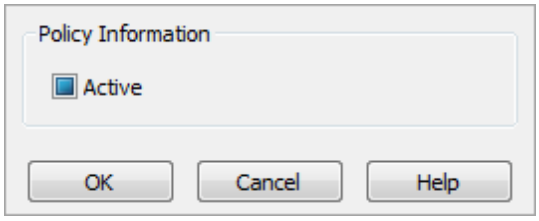


The triangular caution symbol on the policy icon in the left pane of the window indicates that the policy is not active.

From the left pane, you can edit the **Active** setting of a policy. Setting a policy to **Active** allows the policy to run. You can edit the active setting of policies by right-clicking on an individual policy or multiple selected policies (select multiple policies by holding the**Shift** key or the **Control** key and clicking on the desired policies), choosing **Change Active Setting** from the shortcut menu, either selecting or de-selecting the **Active** option in the dialog box, and then clicking **OK**. Click the **Save** button in the toolbar to implement any changes immediately.

When multiple policies are selected with different current active settings, the checkbox will be shaded to indicate the selected policies have different **Active Settings**.



Data Service Policy Menu Items

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Menu Items	Description
File > Save All Policy Settings	Save settings for policies created or modified.
File > Import from	Open an Import from window to select a Data Services Service configuration file that contains values for a policy.
File > Export to	Open an Export to window to select where a Data Services Service configuration file saves to.
File > Exit	Close the application. If changes have been made a Confirmation dialog box appears for saving changes, click **Yes**, **No**, or **Cancel**.
Edit > Create a Policy	Open the Create a Policy window. Assign a new policy name, description of policy, and the type of policy. Also indicate if you want the policy to be active or not.
Edit > Modify Selected Policy	Select a policy listed in the left pane, then select this menu item to modify the existing policy.
Edit > Delete Selected Policy	Select a policy listed in the left pane, then select this menu item to remove the policy from Data Services.
Edit > Delete All Policies	Delete all the policies from the configuration file, and removes policies listed in the left pane.
View > Refresh Policy View	Refresh the view in the left pane for the latest list of policies.
View > Enable Tool Tips	Check mark by this menu item indicates that tool tips for the window will display. The tips are brief descriptions of window controls if the mouse pointer is moved over a control. De-select to turn tool tips off.
View > Enable Policy Tips	Check mark by this menu item indicates that policy tips display in the left pane. Policy tips provide details of the policy as set using the right pane tabs. De-select to turn policy tips off.
Help > Current Page	Open online help to the Data Services Policies webpage.
Help > Data Service Policies Overview	Open online help with focus on Data Services Policies.
Help > Contents	Open the local version of online help.
Help > Online Help	Open the web-based version of online help.
Help > Online Support	Open the support webpage.

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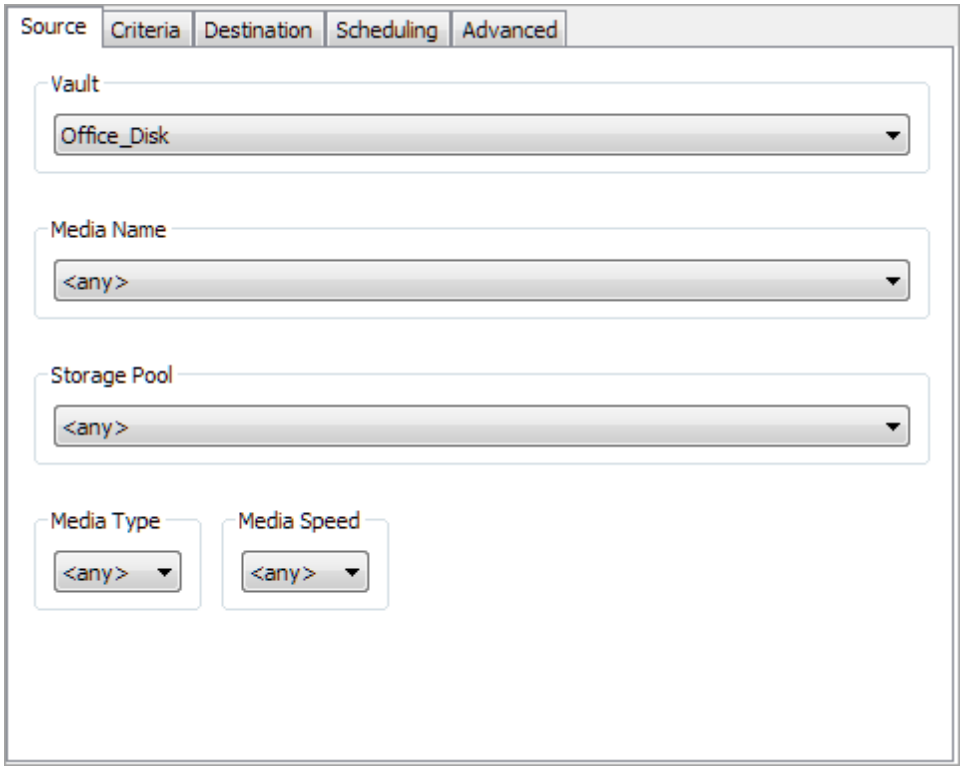
Menu Items	Description
Help > About Data Services Policies	Open the About Data Services Policies window.

Data Service Policies Source Tab

After a Data Service Policy has been added, the next step is to define the source where files are migrated, replicated, or purged from. Use the **Source** tab to specify parameters for the policy for where files come from. The point of origin can be a Vault, media, storage pool, media type, or media speed.



The drop-down elements include a default setting of <any>. If you leave the default setting, then all information from all sources is processed for the given field. For example, if the Vault drop-down is set to <any>, then data from all Vaults within your Information Repository is processed.

Adding to that, the parameters of <any>, <unnamed>, and <new entry> are not placeholders, they are actual names used in your Information Repository - unless changed to alternate names.

Unless you have added new names, only <any>, <unnamed>, <new entry>, and names of Vaults, media, storage pools, media types, and media speeds already implemented in the Information Repository appear in the drop-down lists.

If you plan to add new Vaults, media, or storage pools to the Information Repository and already know names to assign, you can add them manually. However, it is best to select only media that appears in the drop-down list. There are several options for doing this:

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- **Leave defaults (<any> or <unnamed>) and use the Criteria tab to define data to be processed** - Phoenix DEM selects the most accessible Vault and media with the most free space.
- **Select a value from a Source tab group that contains data to process** - Phoenix DEM processes data only from the drop-down list where a value has been selected. For example, if Media Speed S8 is selected, only media with an S8 speed rating is processed. If only a Vault is selected, then data is processed only from the selected Vault, including all of the media and storage pools within the Vault.
- **Select values from every Source tab group for a more focused process** - If values for Vault, Media Name, and Storage Pool have been selected, the options available in the remaining fields are limited according to values already set. For instance, a single storage pool may only contain a few media types to choose from.
- **Create a new entry for Vault, Media Name, or Storage Pool** - Select from the drop-down list <new entry>. A window appears to type a new name. Click **OK**, and the new entry appears in the drop-down list.

  This new name is a placeholder. A Vault cannot be used until it has been added using the Add and Remove Vault Wizard, and the media and storage pool have to be configured using the Vault Admin's Prepare Media window. If you try to run a job without configuration, the job will fail. Drop-down list names above <any> are running in the Information Repository. The names below <any> have not yet been configured.

To reset the **Source** tab, select **<any>** from the Vault drop-down list.

Data Service Policy Source Tab Elements

Element	Description
Vault	From the drop-down list select a Vault, or select **<new entry>** to add a new Vault name. If a Vault is selected, the Media Name drop-down is automatically populated with the media on the given Vault. If a new entry is given, then the Media Name and Storage Pool options are limited to <any> or <unnamed> and <new entry>.
Media Name	Media Name refers to the names of individual units of media in the Vaults within the Information Repository. From the drop-down list select the media, or select **<new entry>** to add a new media name. The system automatically looks for any storage pools comprised of the selected media. If it cannot find any, then the Storage Pool drop-down list displays <any>.

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Element	Description
Storage Pool	Storage pools are groupings of media on a single policy used for a particular purpose. For example, if you had a policy called "Night backup" and it wrote to several units of media, you would use a "Night backup" storage pool and assign to it every unit of media to use for that purpose. For more information see Prepare Media, Storage Pool. From the drop-down list select a storage pool, or select **<new entry>** to add a new storage pool name.
Media Type	Determine the types of media a policy uses by specifying a media type. For example, if "Hdisk" is selected, then only Hdisk media is used. Media Type is useful for processing data of lower importance or less rigorous recovery time objectives. From the drop-down list select the media type. Only media types for the parameters selected in the Vault, Media Name, or Storage Pool drop-down lists are displayed. If none were selected, then only the media types from media available within the Information Repository are displayed. Set either Media Type or Media Speed, but not both.
Media Speed	Source files run based on speed and media performance. This is useful for processing data of lower importance or less rigorous recovery time objectives. Hard disk is considered a high performance media and is assigned a high rating of (S8). Slower data tape technologies are lower performance and are assigned a lower rating of (S0). From the drop-down list select a performance rating. Only media speeds for the parameters selected in the Vault, Media Name, or Storage Pool drop-down lists are displayed. If none were selected, then only the media speeds from media available within the Information Repository are displayed. Set either Media Type or Media Speed, but not both.

New Entry window

If you select **<new entry>** a window appears to type a new entry for either the Vault, Media Name, or Storage Pool source. In these new entry windows you can use wildcards to better manage and specify where files are coming from. Wildcards for file filters operate on file names; directory filters operate on directory name. For more information see Wildcards.

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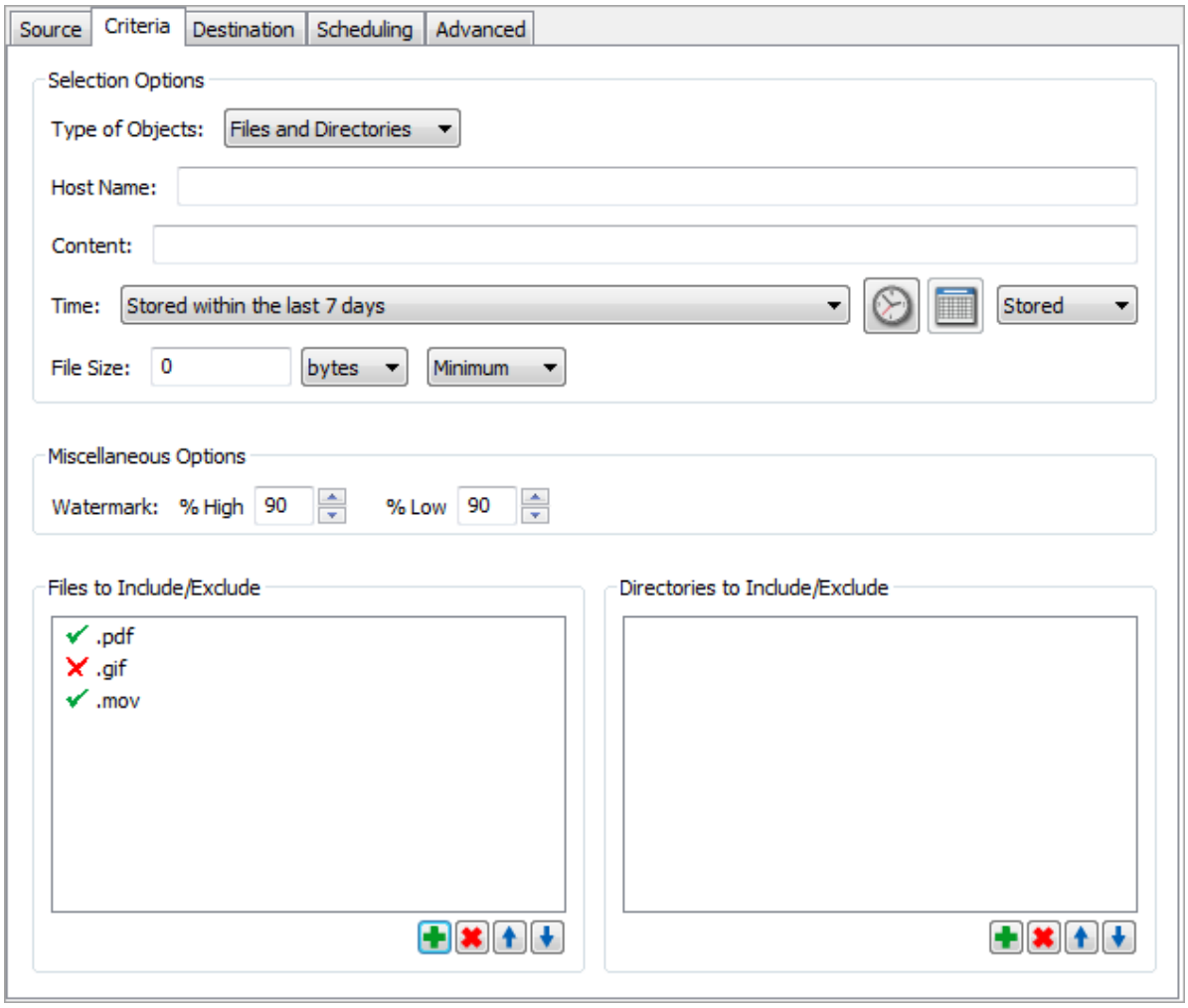
Data Service Policies Criteria Tab

Use the Data Service Policy **Criteria** tab after the **Source** tab. In the **Criteria** tab you can further refine which files are moved, copied, or deleted by configuring the criteria parameters. If all the fields are left empty on this tab, then all of the files that live at the source are migrated, replicated, or purged. To select files from specific locations or of specific types, use file and directory filters.



Data Service Policy Criteria Tab Elements

Element	Description
Type of Objects	Select the types of objects for processing. **Files and Directories** - Both files and directories are processed and rights for both are preserved. **Files Only** - Only files and their rights are preserved, while directories are ignored.

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Element	Description
	Directories Only - Directories and their rights are processed, while files are ignored.
Host Name	Use this parameter to migrate all files from a particular host. The policy processes only files that originally came from the host computer named. Type the name of the computer on the network to define as the host.
Content	Use to limit files processed to those containing a particular word or phrase. Be certain to enclose the phrase in quotation marks, otherwise all files containing any word typed is processed in the query. For more information see Wildcards - content searching. Type a word or phrase to use for criteria for processing.
Time	Select files based on time and date that they were stored or on when they were last accessed. **Time and date** process - 1. From the **Time** drop-down list, select an option that includes a specific time and date (for example, Accessed after HH:MM:AM on Day). The **Clock** button, **Calendar** button, and the **Accessed/Stored** drop-down list are activated. 2. Select **Accessed** or **Stored**. The text in the **Time** drop-down list changes accordingly. 3. Click the **Clock** button to select a time from the Time window. The selected time displays in the **Time** drop-down list. 4. Click the **Calendar** button to select a date from the Date window. The selected date displays in the **Time** drop-down list. **Last accessed** process - 1. From the **Time** drop-down list, select an option that includes an interval of time (for example, Accessed more than x days ago). The **Clock** button and the **Accessed/Stored** drop-down list are activated. 2. Select **Accessed** or **Stored**. The text in the **Time** drop-down list changes accordingly.

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Element	Description
	3. Click the **Clock** button to determine a period of time of years, months, days, hours, and minutes from the Period of Time window. The selected period of time displays in the **Time** drop-down list.
File Size	Use to specify a minimum or maximum file size associated with the policy. This is useful for refining your file selection criteria further. 1. Type a file size in the text box. 2. Select the unit of measurement (bytes, KB, MB, GB). 3. Select **Minimum** or **Maximum**. **Minimum** - The policy only processes files that are larger than the size specified. **Maximum** - The policy only processes files that are smaller than the size specified.
Watermark	Watermarks determine when data is processed as a policy runs - in relation to the percentage of available space on source media. Select a **High** watermark percentage, the processing begins when a policy runs and the amount of data on the source media exceeds the high watermark. Data processing continues until the source media reaches the level indicated by the Low watermark. Select a **Low** watermark percentage, the processing stops when the amount of data on the source media reaches the low watermark.
Files and Directories to Include/Exclude	After making general selections of files and directories to process from the options above, you can apply filters to refine which files or directories to process. **Include** filters - Include only specific files or directories in a job. **Exclude** filters - Rule out specific files or directories from a job. For more information see Filters.

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Data Service Policies Metadata Tab

The creation and configuration of the MetadataExtensions.cfg text file is necessary to view the **Metadata** tab in Phoenix DEM applications where the application reads the file (such as in Data Service Policies), and for optional extended metadata searches in applications such as Search and Retrieve. The **Metadata** tab only displays if it has been configured. The configuration process is intended for advanced users.

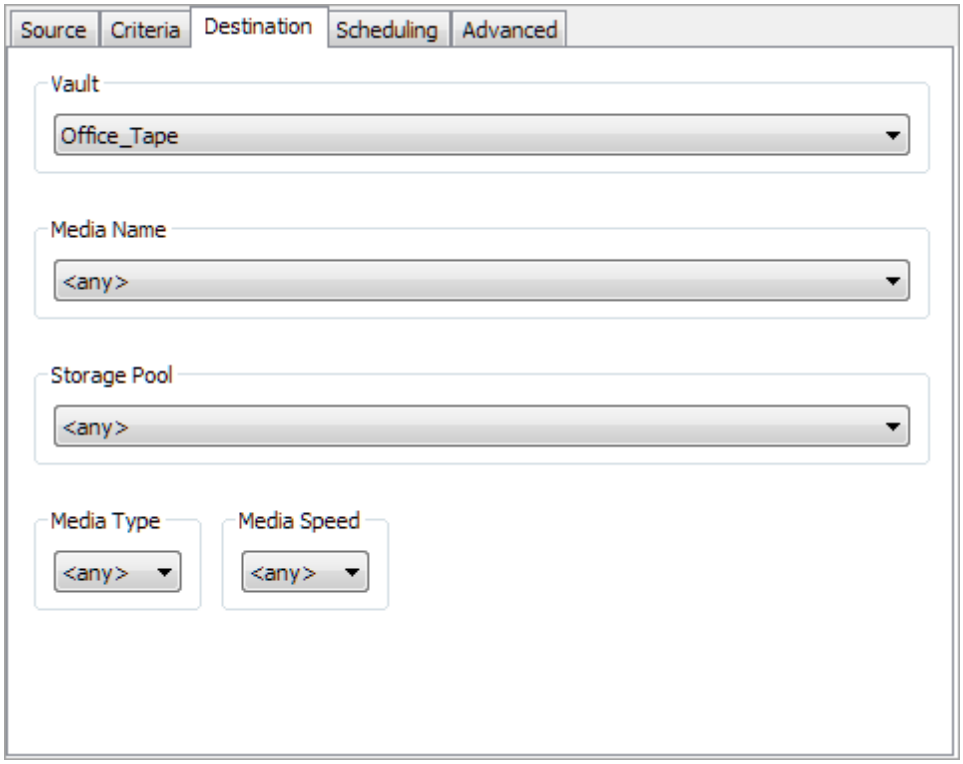
Metadata extensions for Phoenix DEM search applications are all covered in MetadataExtensions.cfg.

The Metadata tab appears in Target and Process, Target and Process Policies, Video Content Manager, and Search and Retrieve only if these applications find a MetadataExtensions.cfg file in <install-dir>**\Config**.

When you create, configure, and implement a MetadataExtensions.cfg, **Metadata** tabs appear in Data Service Policies; they contain the Query blocks listed in the **IngestMdExt** block.

Data Service Policies Destination Tab

Use the Data Service Policy **Destination** tab after defining the policy criteria. In the **Destination** tab you can determine the Vaults, media, and storage pools to store your data.



Only the default names of <any>, <unnamed>, <new entry>, or implemented names of Vaults, storage pools, media, media types, and media speeds already in the Information Repository appear in the **Destination** tab drop-down lists. New names with associated parameters appear also, once added.

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You can enter names of new Vaults, media, or storage pools to the Information Repository before actually adding them and the names will appear beneath <any> in the given field. However, it is recommended to select only media that appears in the drop-down list, otherwise you may increase chances of error.

There are several options for populating the **Destination** tab fields:

- **Leave the default values (<any>)** - Phoenix DEM determines the most accessible Vault and the media with the most free space.
- **Select a parameter and let Phoenix DEM take care of the rest** - For example, if the Media Speed of S8 is selected, then only media running at the speed associated with S8 writes. Or, if Storage Pool or Media Name is selected, then files are only sent to the storage pool or media selected. With a selected Vault, Phoenix DEM uses the most available Vault or media with the most free space.
- **Select a parameter and select available parameters from remaining fields** - If a Vault, Media Name, or Storage Pool parameter is selected, then remaining fields have limited options available which correspond to the parameter.

To reset the **Destination** tab with all parameters from any field, select **<any>** in the **Vault** group.

Several units of media can be assigned to a single storage pool. See Prepare Media - Storage Pool.

- **Create a new entry for a Vault, Media Name, or Storage Pool** - From the Vault, Media Name, or Storage Pool drop-down list, select **<new entry>**. The Enter New Name window appears for you to type a new name. Click **OK** and the new entry appears in the field's drop-down list.

This method is recommended only for special circumstances. If a job is run with a Vault or media that is not actually running in the Information Repository, the job fails.

The <any> item in the drop-down list also acts as a divider between Vault, media, and storage pools implemented and those not implemented. Names above <any> are the ones running in your Information Repository, and the names below <any> are entered but do not yet have hardware implemented in the Information Repository. These are not saved if not selected when saving the policy.

The limitations to adding a new name for a Vault, Media Name, or Storage Pool are:

- Typing a new name for the Vault, Media Name and Storage Pool options are limited to <any> and <new entry>.
- New entries in Media Name or Storage Pool do not limit options in the remaining fields.
- Wildcard additions (for example, Ac*), appear beneath <any>. See Wildcards.

Data Service Policy Destination Tab Elements

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Element	Description
Vault	From the drop-down list select a Vault, or select **<new entry>** to add a new Vault name. If a Vault is selected, the Media Name drop-down is automatically populated with the media on the given Vault. If a new entry is given, then the Media Name and Storage Pool options are limited to <any> or <unnamed> and <new entry>.
Media Name	Media Name refers to the names of individual units of media in the Vaults within the Information Repository. From the drop-down list select the media, or select **<new entry>** to add a new media name. The system automatically looks for any storage pools comprised of the selected media. If it cannot find any, then the Storage Pool drop-down list displays <any>.
Storage Pool	Storage pools are groupings of media on a single policy used for a particular purpose. For example, if you had a policy called "Night backup" and it wrote to several units of media, you would use a "Night backup" storage pool and assign to it every unit of media to use for that purpose. For more information see Prepare Media, Storage Pool. From the drop-down list select a storage pool, or select **<new entry>** to add a new storage pool name.
Media Type	Determine the types of media a policy uses by specifying a media type. For example, if "Hdisk" is selected, then only Hdisk media is used. Media Type is useful for processing data of lower importance or less rigorous recovery time objectives. From the drop-down list select the media type. Only media types for the parameters selected in the Vault, Media Name, or Storage Pool drop-down lists are displayed. If none were selected, then only the media types from media available within the Information Repository are displayed. Set either Media Type or Media Speed, but not both.
Media Speed	Source files run based on speed and media performance. This is useful for processing data of lower importance or less rigorous recovery time objectives.

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Element	Description
	Hard disk is considered a high performance media and is assigned a high rating of (S8). Slower data tape technologies are lower performance and are assigned a lower rating of (S0). From the drop-down list select a performance rating. Only media speeds for the parameters selected in the Vault, Media Name, or Storage Pool drop-down lists are displayed. If none were selected, then only the media speeds from media available within the Information Repository are displayed. Set either Media Type or Media Speed, but not both.

Data Service Policies Scheduling Tab

Use the Data Service Policies **Scheduling** tab to define when jobs are to run. Jobs can be scheduled to run on a daily or weekly basis while setting only a few general parameters or jobs can be scheduled using exact dates and times with specific parameters set.

A scheduled job is implemented as soon as the Data Service Policy is saved (assuming all other parameters are acceptable).

Scheduling a Job

The Scheduling tab displays different fields to populate depending on the parameter set for the **When should the job run?** option.

From the **When should the job run?** drop-down list, select one of the options to schedule a process. Each are described below.

- Option 1: On selected days each week
- Option 2: Repeatedly at a defined interval
- Option 3: On specific dates & times

On selected days each week

Use this option to schedule jobs to run on particular days at specific times. When this option is selected, the **Scheduling** tab displays as follows:

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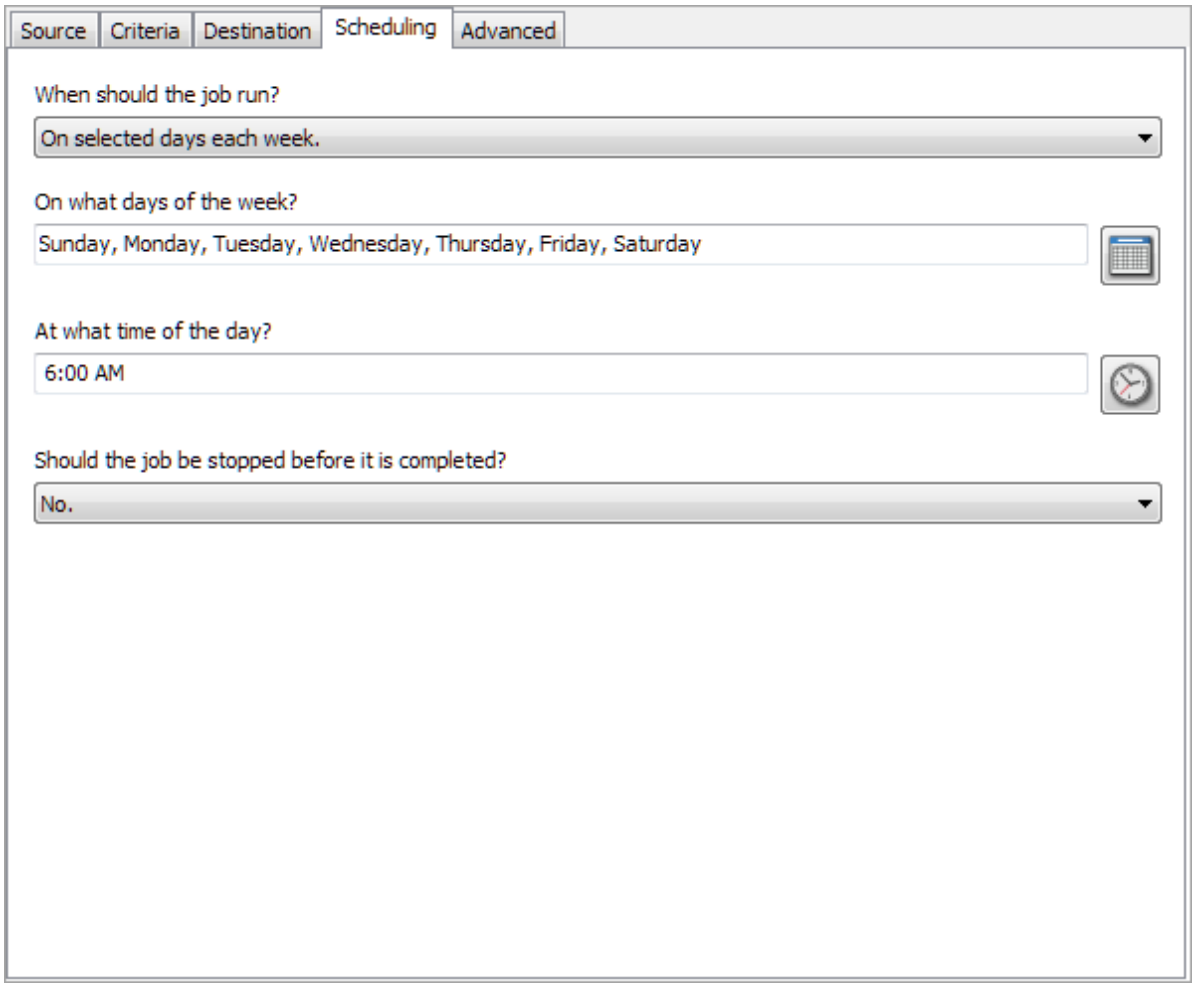

1. Next to the **On what days of the week?** text box, click the **Calendar** button to open the Days window. Set the days of the week to run the job.
2. Next to the **At what time of the day?** text box, click the **Clock** button to open the Time window. Set the time for the job to start running.
3. Determine if the job should be stopped before it completes. This option is useful if there is or could be a conflict with another process. If **Yes** is selected, the Duration window appears for you to specify the job duration time.

For more information about the Days, Time, and Duration windows see Job Scheduling.

Repeatedly at a defined interval

Use this option to schedule jobs to run repeatedly at a set interval, for as long as the policy is active. To stop a policy that has been set to run repeatedly, you must deactivate, change, or delete the policy. When this option is selected, the **Scheduling** tab displays as follows:

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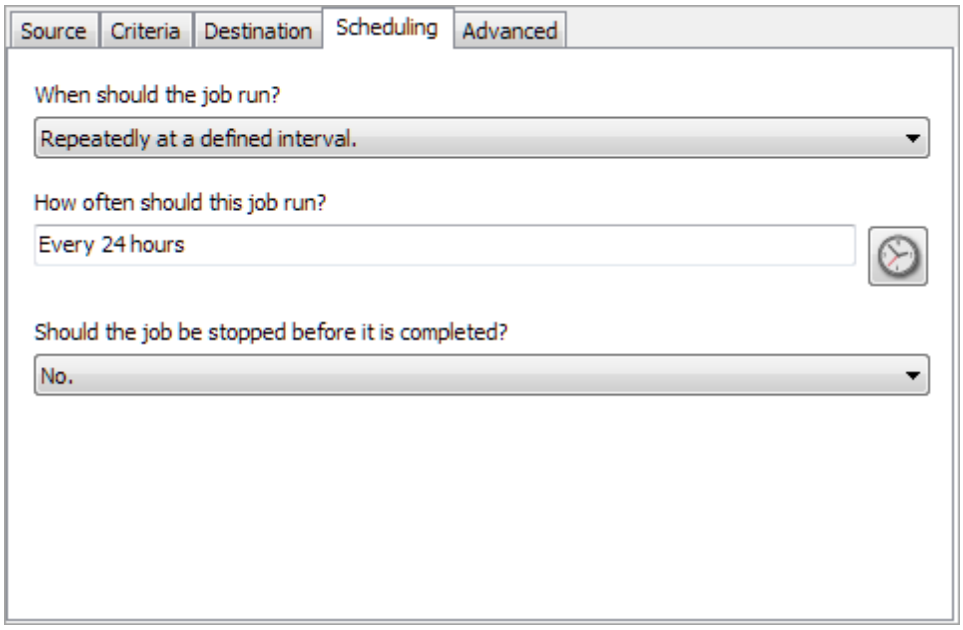

1. Next to the **How often should this job run?** text box, click the **Clock** button to open the Time Interval window. Set the interval time for the job to incrementally run.
2. Determine if the job should be stopped before it completes. This option is useful if there is or could be a conflict with another process. If **Yes** is selected, the Duration window appears for you to specify the job duration time.

On specific dates & times

Use this option to schedule jobs to run on specific dates and times. When this option is selected, the **Scheduling** tab displays as follows:

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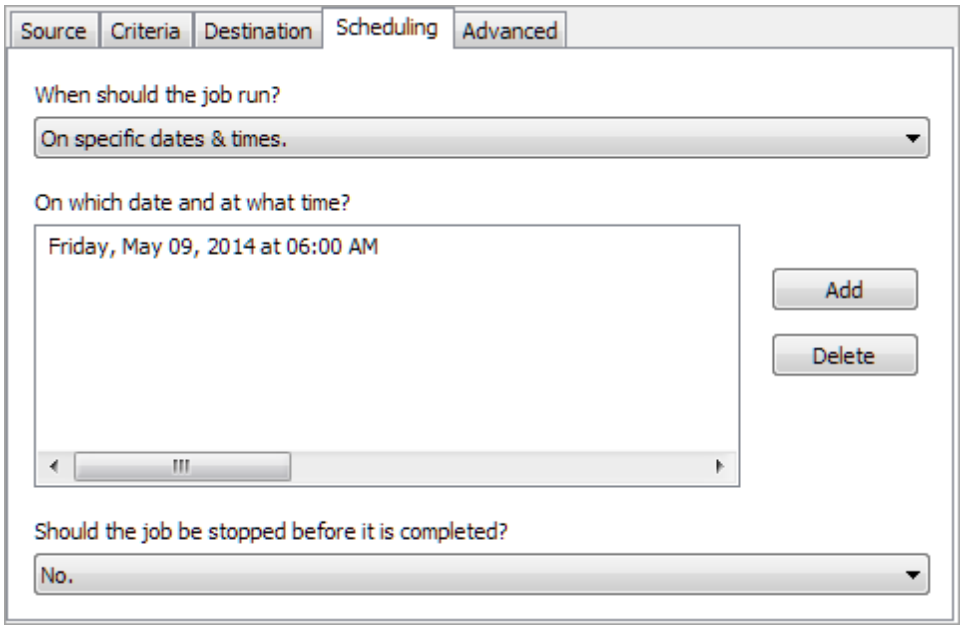

1. Click the **Add** button to add a scheduled runtime for the job. The Date window appears for you to select a date, and then the Time window appears for you to select a time.

2. To delete scheduled run dates and times, from the **On which date and at what time?** box, select a date and time entry and then click the **Delete** button to remove the setting.

3. To edit a date and time entry, delete the entry you want to change and then add a new run date and time.

4. Determine if the job should be stopped before it completes. This option is useful if there is or could be a conflict with another process. If **Yes** is selected, the Duration window appears for you to specify the job duration time.

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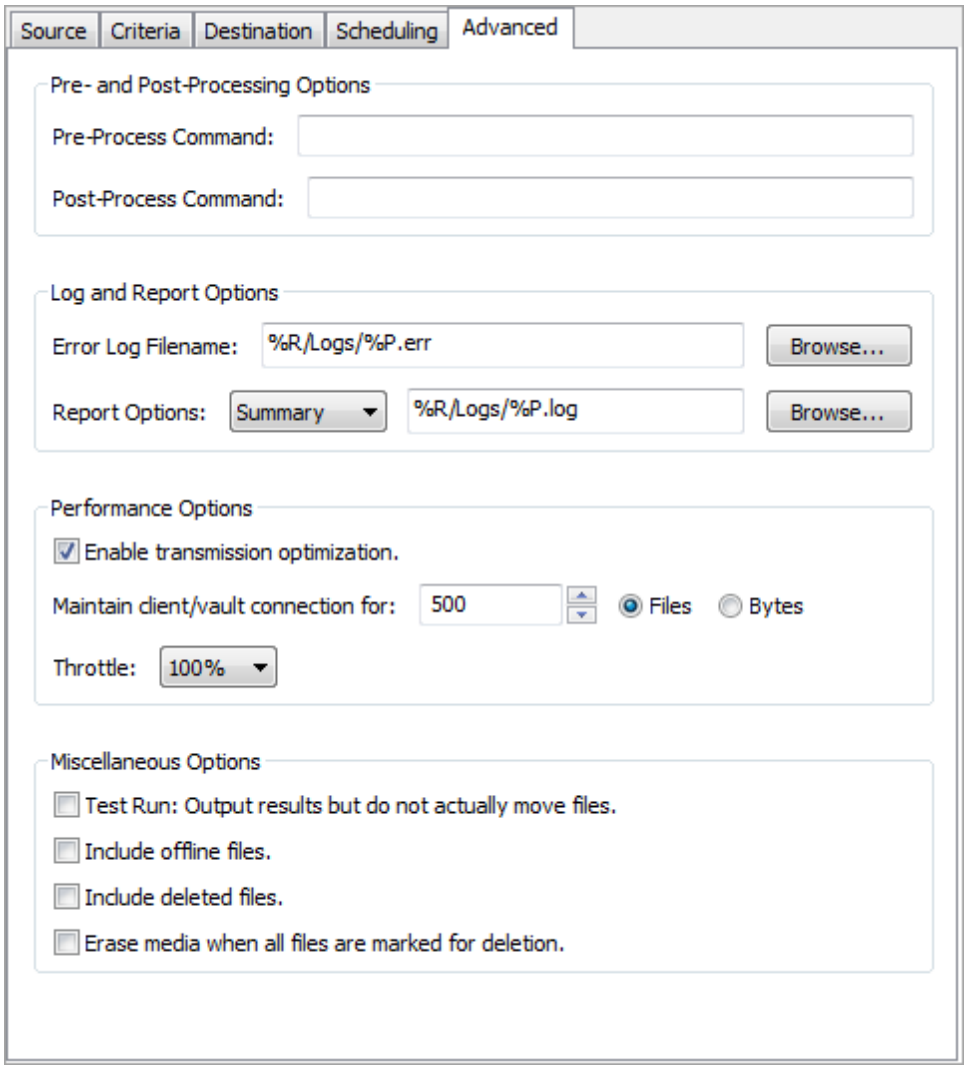
Data Service Policies Advanced Tab

Use the Data Service Policy **Advanced** tab after you have defined a schedule for your policy. The **Advanced** tab offers more options to define how your jobs operate and process.



Data Service Policy Advanced Tab Elements

Element	Description
Pre- & Post-Processing Command	Use the pre-processing and post-processing commands to execute commands before and after each session. Type a pre-processing or post-processing command, or both, into the text boxes. Command strings can be pointers to executable files with arguments, pointers to shell scripts, or a command string that the local processor is equipped to accept.

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Element	Description
	The following are variables in pre-processing and post-processing commands: %P or %Pn - Policy Name %H or %Hn - Host Name %D - Date (yyy:mm:dd) %Dy - Year %Dm - Month %Dd - Day %T - Time (hh:mm) %Th - Hour %Tm - Minute %Ts - Second %R or %Rn - Root path name. Valid only at the beginning of a string %Ne - Number of errors %Nr - Number of retries %Nb - Number of bytes written %Nf - Number for files written
Error Log Filename	An error log file is created anytime an error is encountered during a job. It is useful for troubleshooting problems. The **Error Log Filename** text box can include literal file names or a combination of file name field variables to generate file names for logs. • Leave the default variables in place, or type in a file name and extension to use, or type in a variable name using file name field variables (see File Name Field Variables section below). • Use the **Browse** button to define a new location and type in the file name that you want to use, including an extension.
Report Options	When a job runs, one of the following report files is created: **Summary** - A header and summary report

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Element	Description
	Complete - Same as summary and lists all files **Diagnostic** - Complete, but adds relevant, diagnostic information • From the drop-down list select a report option. Use the **Summary** or **Complete** options on a normal basis and switch to **Diagnostics** if problems occur. • In the **Report Options** text box, leave the default variables in place, or type in the file name and extension to use, or type a variable name using file name field variables (see File Name Field Variables section below). • Use the **Browse** button to locate a file to overwrite an already existing log file.
Enable Transmission Optimization	Select for the client to constantly monitor its processes and to determine the best network transmission protocol for files being processed. Leave this option selected to get up to a 20% increase in performance. If the Information Repository is slow, run a few timed tests to determine a setting that works best for your Information Repository.
Maintain Client/Vault Connection	Vault connection sharing determines how many files are sent from the source Vault to the destination Vault in a single connection. The higher the number of files or bytes transferred, the longer the connection between the source and destination Vault are maintained. Access to a particular Vault resource (such as one drive of a multi-drive storage device) used by a process on one client is restricted and inaccessible to other clients in the network for the duration of the connection. To illustrate this, imagine an environment where a single Vault with a single tape drive is used to service several desktop clients. When a client is configured with a connection sharing set to 250 files, and other clients are configured to start jobs at the same time, no client can connect until the first client is finished. Each connection to the server locks out other connections, and other clients must wait before processing files. 1. Type a value into the **Maintain Client/Vault Connection for** text box.

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Element	Description
	2. Select the **Files** radio button or **Bytes** radio button. By selecting Files, a connection sharing proceeds based on the number of files transmitted; and if Bytes, based on the number of bytes.
Throttle	The throttle controls the speed that files are sent to the Vault. Lower numbers reduce the bandwidth. Throttle values range from 10% to 100% of total available bandwidth. • From the **Throttle** drop-down list, select a percentage to operate the client on its host computer for maximum performance. Phoenix DEM is designed to operate at maximum performance of its host computer, network environment, and storage resources available. During normal working hours, running a job at peak performance could interfere with other network operations.
Test Run: Output Results but do not actually move files	Use to test a job before doing it live. This is useful after creating a complex set of process parameters that include filters and other options. • Select **Test Run: Output results but do not actually move files**. When the process is scheduled to run, the files that match the criteria build, but files are not moved. Results output in a report, defined in the **Report Options** field.
Include Offline Files	Since all of your stored files are logged, you can include offline files when processing jobs. If the files are located on offline media, the job requires more time as the system has to wait whenever offline media is required.
Include Deleted Files	Process files marked as deleted in tape media. • Select to set the policy to process files marked as deleted. If this option is de-selected the policy ignores these files. On media types, like magnetic tape, it is not possible to remove files that have been deleted or purged from the Information Repository. Because it writes sequentially, a file marked for deletion may lie on the media between two viable files. The files eligible for removal are marked as deleted even though they remain on the media.
Erase media when all files are deleted or no longer referenced	Media will be erased when all the files stored on that media have been marked for deletion.

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Element	Description
	• Select this option to erase the media when all files are deleted or no longer referenced. For media which do not support random file deletion (i.e. tape), this will make the media fully available and usable again. This option is only enabled when a policy is a **purge** or **migrate** policy.

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Offline Media

During a data service job, offline media is used only if **Include offline files** is selected from the **Advanced** tab. If **Include offline files** is not selected, attempting to use media that is offline may result in a "No resources available" error if media cannot be found.

File Name Field Variables

The file path can include a literal file name or a combination of variables to generate file names for reports. Use variables to distinguish between reports and to find specific reports.

If a path with a literal file name is typed like C:/Program Files/Logs/Job_Report.log, the system generates the report destination folder Logs (if it does not already exist) and a report named Job_Report.log. If a path with variables for the file name is typed, for example, %R/Logs/%P_from_%H_on_%D_at_%T, the system generates the report destination folder and a report — where policy name, host name, date, and time are populated with the actual details from your Information Repository and job.

The following are the variables to use. When using multiple variables, separate them from each other with an underscore (_).

Variable	Description
%P or %Pn	Policy Name
%H or %Hn	Host Name
%D	Date (yyyy:mm:dd)
%Dy	Year
%Dm	Month
%Dd	Day
%T	Time (hh:mm)
%Th	Hour
%Tm	Minute
%Ts	Second
%R or %Rn	Root Pathname. Valid only at the beginning of a string

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Customization

SoleraTec's Phoenix DEM has many strengths for managing your digital data assets. One of the key benefits is the ability to customize Phoenix DEM and really make it your own so that it is the best solution it can be for your specific needs.

The customization topics are intended for advanced users and are easy to use once mastered. Phoenix DEM applications are highly customizable through use of the following items:

- **Wildcards** - Phoenix DEM supports the use of wildcards for more efficient data asset searches.
- **Filters** - Make use of filters during data asset searches, with or without wildcards, to include or exclude specific (or groups) of files or directories.
- **ExportExtensions.cfg** - Use to customize export options for files and video that have been retrieved.
- **Site.cfg** - Use to work remotely on a network subnet that does not have multicast capabilities.
- **Command line arguments** - Use as an alternative way for executing functionality for Phoenix DEM applications.
- **Key configurations** - Use to modify default functionality settings as seen in the application interfaces.

Wildcards

For effective, thorough, and quick searching, Phoenix DEM offers the availability of employing wildcard characters throughout all applications. Wildcards are useful for searching and filtering stored video, files and file names, directories and directory names, and content within your Information Repository. See also Filters .

The two types of wildcards Phoenix DEM recognizes are:

- **POSIX standard wildcards** - For use in path names, filtering, and metadata searching.
- **Regular expressions** - For use only in text or content searching. For example, a word in a file.

POSIX Standard Wildcards

Use these standard wildcards when creating file and directory filters or when searching for files and metadata. These wildcards are convenient to use in text boxes on windows dealing with the Vault, Media Name, and Storage Pools. Wildcards for file filters operate on file names; directory filters operate on directory name.

A single wildcard character represents a single variable in a query and wildcard operators search for words with variable characters.

The following are things to keep in mind when using the standard wildcards:

- Wildcards can be used in combination with other wildcard characters.

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- Searches are not case sensitive.
- These wildcard operators do not work for content searching (you must use the regular expressions).
- For predictable results when using wildcards for metadata, it is best to avoid using * and #.

POSIX Standard Wildcard Table

The table below lists all the wildcard operators for conducting file, metadata, and window text box searches. Two basic and common operators (they are the first two in the table), are highlighted for quick query reference:

? = a single character wildcard, to represent a single variable.

*** = a string wildcard, to represent a variable string of zero or more characters.**

Wildcard	Description
? **Any single character**	Substitutes a single character or can be combined to represent multiple characters. Use the ? for specific alternative spellings. ? substitutes a single character ?? substitutes two characters ??? substitutes three characters, and so on. If used in a path, it cannot replace a forward slash (/). Use ? within or at the end of a phrase. Examples: The query **cell?** searches names containing **cell**+**<one additional character>**. (cells and cello, but not cell) The query **.xl?** searches names containing **.xl**+**<a third character>**. (.xls or .xlr) The query **wom?n** searches names containing **wom**+**<a fourth character>**+**n**. (woman or women) The query **carbon fib??** searches names containing **carbon fib**+**<two characters>**. (carbon fiber or carbon fibre)
***** **Zero or more characters**	Substitutes zero or more characters or can be used to truncate multiple characters. Use * for alternative spellings and an unlimited number of characters within a word. If used in a path, it cannot replace a forward slash (/). Examples:

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Wildcard	Description
	The query **behavi*r** searches names containing **behavi+<any character or number of characters>+r** . (behaviour, behavior, or behavi123.zr) The query **patent*** searches names containing **patent+ <a character or any number of characters>**. (patents, patentable, patented, patent123) The query **patent*.jpg** searches names containing **patent+<a character or any number of characters> +.jpg**. (patents.jpg, patentable.jpg, patented.jpg, patent123. jpg, etc; ***.jpg** substitutes for only all names containing **<any character or set of characters>+.jpg**
***?** **One or more characters**	Substitutes a minimum number or more characters. The minimum number of characters matched is equal to the number of ? that follow the *. *?? substitutes for at least two characters. *??? substitutes for at least three characters, and so on. If used in a path, it cannot replace a forward slash (/). Use *? within or at the end of a word. Examples: The query **carbon fib*??** searches for carbon fiber, carbon fibre, carbon fibers, carbon fibres, and carbonfib123. The query **actua*????** searches for filenames containing **actua+<four or more additional characters>**. (actuarial, actuaries, actualization, actua12345.xls, but not actual)
# **Zero or more characters in a pathname, including slashes**	Substitutes for zero or more characters in a path name; valid for use only within a path. Use to denote the forward slash (/). Example: The query **document#Q42007** searches for **document +<any character, including slashes or no character>+Q42007**. (documentQ42007, documentsQ42007, document1Q42007, and document/ Q42007)

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Wildcard	Description
#? **One or more characters in a pathname, including slashes**	Substitutes for a minimum number or more characters in a path name; valid for use only within a path. The minimum number of characters matched is equal to the number of ? that follow the #. Matches the forward slash (/). Example: The query **document#?Q42007** searches for **document+<any character, including slashes>+ Q42007**. (documentsQ42007, document/Q42007, and documents/123Q42007)
[ ] **Set of characters**	Substitutes a set and includes any one of the characters in the set. Or, an ASCII sequential run of characters can be indicated by using a hyphen to separate the first character in the sequence from the last character in the sequence: [<beginning character>-<end character>]. Examples: The query **[afe]** matches a, f, or e. The query **[a-m]** matches any single character in the range of a to m.
[!] **Characters not in set**	Substitutes any one character that is not specified in a set. Or, an ASCII sequential run of characters can be indicated by using a hyphen to separate the first character in the sequence from the last character in the sequence: [! <beginning character>-<end character>]. Examples: The query **[!afe]** searches for any single character other than a, f, or e. The query **[!a-m]** searches for any single character that is not in the range of a-m.
! **Entire pattern not in set**	When **!** is the first character of a pattern, the entire pattern is omitted. Example: The query **!primary** returns everything except "primary".

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Wildcard	Description
	When using this wildcard in extended metadata searches, it is best to use "is equal to". To obtain predictable results, avoid "contains", "does not contain", and "is not equal to."
\ **Escape next character**	Causes the character following the backslash to be treated as a literal character. Normally, this is used with one of the wildcard characters to denote that character itself, not its wildcard expression meaning. Example: To process **Accounting*2007**, type **Accounting*2007** since * is normally interpreted by the Information Repository as a wildcard.
Multiple wildcards	Along with using wildcards individually, combine them to create powerful filters and search criteria. Example: The query **[abc]*.xls** searches any phrase beginning with **a**, **b**, or **c+<any character or number of characters>+.xls**. The query **[!abc]*.xls** searches any phrase not beginning with **a**, **b**, or **c+<any character or number of characters>+.xls**. The query **and*.???** searches **and+<any number of characters>+.+any three characters**.

More POSIX Standard Wildcard Examples

The examples in the following table illustrate contrast in the way wildcards function differently from one another.

Wildcard	Sample Phrase	Matches	Does not match
? **Any single character in a name**	path?.doc	path1.doc paths.doc pathq.doc etc.	path path/.doc path.doc path_sample.doc etc.

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Wildcard	Sample Phrase	Matches	Does not match
***** **Zero or more characters in a name**	path*.doc	path.doc path1.doc path_sample.doc etc.	path path/1.doc path1.docs etc.
***?** **One or more characters in a name**	path*?.doc	path1.doc paths.doc path_sample.doc etc.	path path.doc path/.doc etc.
# **Zero or more characters in a pathname, including slashes**	path#.doc	path.doc path1.doc path_sample.doc path/1.doc etc.	path path1.docs sample/path.doc etc.
#? **One or more characters in a pathname, including slashes**	path#?.doc	path1.doc path_sample.doc path/1.doc etc.	path path.doc path1.docs etc.
[ ] **Set of characters**	path[1-3].doc	path1.doc path2.doc path3.doc	path path.doc path.docs path4.doc path5.doc patha.doc pathq.doc etc.
[!] **Characters not in set**	path[!1,2,3].doc	path0.doc path4.doc	path1.doc path2.doc

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Wildcard	Sample Phrase	Matches	Does not match
		path5.doc patha.doc pathq.doc etc.	path3.doc path path.doc path.docs etc.
! **Entire pattern not in set**	!path.doc	all other files in repository	!path.doc

Regular Expressions (Content Searching)

Use regular expressions to search for specific content or text manipulation.

The following are things to keep in mind when using the standard wildcards:

- With or without quotation marks, search is not case sensitive.
- These wildcard operators do not work for file or directory search and filtering (you must use the POSIX standard wildcards).

Regular Expressions Table for Content Searching

This functionality allows you to put limitations on files that are processed to those containing a particular word or phrase.

Quotation marks - To process only files that contain a specific phrase, be sure to enclose the phrase in quotation marks. Otherwise, all files containing any word typed is processed in the query. For example, if searching "Information Repository", only files that contain the complete phrase "Information Repository" are processed. In contrast, without quotation marks in place, any file containing Information Repository, Repository Information, Information, or Repository are processed.

The table below lists all the wildcard operators only for content searching.

Wildcard	Description
? **Any single character**	Substitutes a single character or can be combined to represent multiple characters. Use the ? for specific alternative spellings. ? substitutes a single character ?? substitutes two characters

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Wildcard	Description
	??? substitutes three characters, and so on. If used in a path, it cannot replace a forward slash (/). Use ? within or at the end of a phrase. Examples: The query **cell?** searches names containing **cell**+**<one additional character>**. (cells and cello, but not cell) The query **.xl?** searches names containing **.xl**+**<a third character>**. (.xls or .xlr) The query **wom?n** searches names containing **wom**+**<a fourth character>**+**n**. (woman or women) The query **carbon fib??** searches names containing **carbon fib**+**<two characters>**. (carbon fiber or carbon fibre)
***** **Zero or more characters**	Substitutes zero or more characters or can be used to truncate multiple characters. Use * for alternative spellings and an unlimited number of characters within a word. If used in a path, it cannot replace a forward slash (/). Examples: The query **behavi*r** searches names containing **behavi**+**<any character or number of characters>**+**r**. (behaviour, behavior, or behavi123.zr) The query **patent*** searches names containing **patent**+**<a character or any number of characters>**. (patents, patentable, patented, patent123) The query **patent*.jpg** searches names containing **patent**+**<a character or any number of characters>**+**.jpg**. (patents.jpg, patentable.jpg, patented.jpg, patent123.jpg, etc; ***.jpg** substitutes for only all names containing **<any character or set of characters>**+**.jpg**
***?** **One or more characters**	Substitutes a minimum number or more characters. The minimum number of characters matched is equal to the number of ? that follow the *. *?? substitutes for at least two characters.

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Wildcard	Description
	*??? substitutes for at least three characters, and so on. If used in a path, it cannot replace a forward slash (/). Use *? within or at the end of a word. Examples: The query **carbon fib*??** searches for carbon fiber, carbon fibre, carbon fibers, carbon fibres, and carbonfib123. The query **actua*????** searches for filenames containing **actua+<four or more additional characters>**. (actuarial, actuaries, actualization, actua12345.xls, but not actual)
~ **Proximity searches**	Use a proximity search to find words that are within proximity to one another. To execute, use **~** (the tilde symbol) and a value at the end of a phrase. Example: To query for "**compliance**" and "**December**" within 10 words of each other use **compliance December~10**.
~ **Fuzzy searches**	Use a fuzzy search to find an approximate spelling. To execute, use **~** (the tilde symbol) at the end of a single term. Example: To query for a term similar in spelling to "**report**" use **report~**. This search find terms like deport, reports, and reporting. You can specify the level of similarity. Using a value between 0 and 1, only terms with a higher similarity are matched with values closer to 1. For example, **roam~0.8**. The default is 0.5 if a value is not defined.
[] **{}** **Range searches (TO)**	Use range searches to match documents where field values are between the lower and upper limits specified by the search, and the searches can be inclusive or exclusive of the limits. Inclusive range searches are marked by brackets. Exclusive range searches are marked by curly braces. Example:

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Wildcard	Description
	To query a date, **mod_date:[20020101 TO 20030101]** finds files whose mod_date fields have values between 20020101 and 20030101, inclusive. To query a non-date, **title:{accounting TO sarbanes}** finds files whose titles are between **accounting** and **sarbanes**, but excluding **accounting** and **sarbanes**.
^ **Boosting a term**	Control the relevance of a document by boosting the value of a specific term to search for. To boost a term, use **^** (the caret symbol) with a boost factor (a number) at the end of the search term. The higher the boost factor, the more relevant the returned term will be. By default, the boost factor is 1. Although the boost factor must be positive, it can be less than 1 (for example, 0.2). Example: To query **corporate compliance** and you want the term **compliance** to appear more relevant, boost it using **^** along with the boost factor next to the term. Type **corporate compliance^4**. Boost phrase terms by enclosing a phrase in quotation marks. **"corporate compliance"^4**
OR **AND, &&** **+** **NOT, !, -** **boolean operators**	Boolean operators allow terms to be combined through logic operators. **AND**, **OR**, **+**, and **NOT** are supported as boolean operators. Boolean operators must be in capital lettering. **OR** OR links two terms and finds a matching document when either of the terms exist in a document. **||** can be used in place of OR. OR is the default conjunction operator, meaning that if there is no boolean operator between two terms, OR is assumed. Example: To query documents that contain **corporate compliance** or **compliance**, you would use **"corporate compliance" OR compliance**. The quotes indicate a single phrase. **AND**

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Wildcard	Description
	AND matches documents where both terms exist anywhere in the text of a single document. && can be used in place of AND. Example: To query documents that contain **corporate compliance** and **Second Quarter 2007,** use **"corporate compliance" AND "Second Quarter 2007"**. The quotes indicate a single phrase. **+** The plus symbol requires that the term after + exists somewhere in a single file. Example: To query files that contain **compliance** and may contain **corporate** you would use **corporate + compliance**. **NOT** NOT excludes documents that contain the term after NOT. **!** (exclamation point) or **-** (minus symbol) can be used in place of NOT. NOT cannot be used with just one term. Example: To query documents that contain **corporate** but not **compliance** use, **corporate NOT compliance**. **Grouping** To control the boolean logic for a query, use parentheses to group clauses to form sub queries. Example: To query for either **corporate** or **compliance** and **Second Quarter 2007** you would use **(corporate OR compliance) AND "Second Quarter 2007"**. This ensures the phrase after AND must exist and either term within the parentheses may exist. **Field Grouping** Use parentheses to group multiple clauses to a single field.

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Wildcard	Description
	Example: To query a file containing both **return** and the phrase **overdue accounts** you would use **title: (+return +"overdue accounts")**.
\ **Escaping special characters**	Escaping special characters can be a part of the query syntax. Special characters are: **+ - && || ! ( ) { } [ ] ^ " ~ * ? : ** To execute a search using these characters literally (to escape any of these character), use \ before the character. Example: To query for **(1+1):2**, use **\(1\+1\)\:2**. In this case, if you do no use the escape character for **(1+1):2**, the query would search for **(OR 1 OR AND 1 OR) OR : OR 2**. It is recommended to avoid using characters that Phoenix DEM interprets as special. If you need to use a character literally that Phoenix DEM uses as a wildcard, the character must be preceded by an escape character (\ ).

Metadata Ingest and Wildcards

When ingesting metadata, special characters normally interpreted as wildcards (?, *, #, !, ~, ^, &, [ ], { }, \, ") are not interpreted as wildcards. But, when searching for metadata, wildcards are recognized. If ingested metadata does contain special wildcard characters, then any searches need to include the escape character (\) to denote that the wildcard is intended literally, and not as a wildcard. For example, if 16*37 is ingested as metadata, and then you want to search for this expression, the search query should be 16*37.

Filters

The two main types of filters used in Phoenix DEM are file and directory and can be applied in several of the product applications. Use filters to pinpoint the inclusion or exclusion of specific (or groups) of files or directories. Wildcards may also be used when formulating a filter. For more information, see Wildcards.

File filters operate on file names and directory filters operate on directory names. If a policy features both file and directory files, then both types are used. File filters and directory filters can complement each other but the product processes them separately, first applying any directory filters and then applying any file filters.

Exclude filters - Implies "include all", meaning that everything is processed in the job unless files or directories are explicitly excluded.

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Include filters - Implies "exclude all", meaning that only the files or directories specified by an include filter are included in a job.

Filters process exactly what you type. For example, if you create an include filter for **.doc**, then the processed files are literally named **.doc**. If you want to process all files that are of a .doc type, the filter would include a wildcard: ***.doc**.

File Filters

If a file filter does not have a path delimiter, the product matches the pattern against the last leaf of the path, which is the file name itself. If the file filter does have a path delimiter, the product matches the pattern against the entire path, including the file name.

File filters are read from the top down. For example, if you have an exclude file filter that excludes all .jpg files followed by a filter that includes all .jpg files, the .jpg files are excluded.

Directory Filters

If a directory filter does not have a path delimiter, the product tries to match the pattern against the last leaf of the path separately and looks for the first match. If a directory filter does have a path delimiter, the product matches the pattern against the entire path.

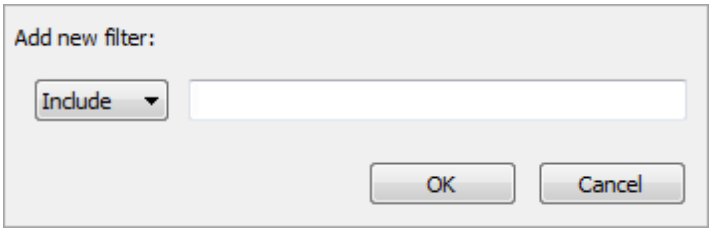
Directory filters are read from the top down. For example, if you have an exclude directory filter that excludes all folders named Pictures followed by a filter that includes Pictures/2003Convention, the first filter takes precedence and Pictures/2003Convention is not included.

When typing paths or path searching patterns, use the forward slash (/).

Create File Filters and Directory Filters

File filters enable you to include or exclude particular files by file name or file type. Directory filters enable you to include or exclude directories and their contents. It is possible to use file and directory filters at the same time.

1. In the **Files to Include/Exclude** or **Directories to Include/Exclude** group, click the **Add** button.



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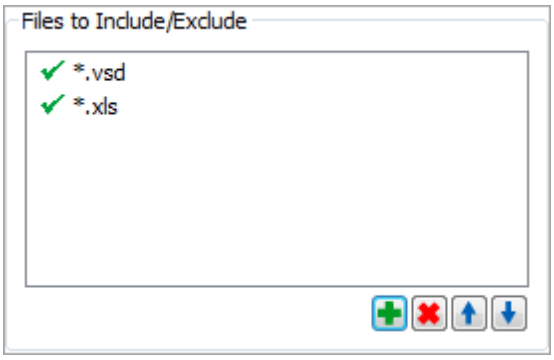
2. Select a filter type. Use **Include** to ensure the inclusion of files, directories, and file types. Use **Exclude** to exclude files, directories, and file types. This text box supports characters, numbers, and symbols needed to define filters.

3. Type a filter, and then click **OK**. For example, in the **Files to Include/Exclude**, if you type *.vsd and then *.xls, the text box would appear as follows. Include filters are preceded by a ✔ green check mark, and exclude filters by a ✘ red x.

   The **Files to Include/Exclude** or **Directories to Include/Exclude** group boxes display the values entered from the Add Filter dialog box. Wildcards are supported.

   To assign priority to filters, move them up and down using the up arrow button and down arrow button.



Delete File Filters and Directory Filters

In the **Files to Include/Exclude** or **Directories to Include/Exclude** group, select a filter, and click the **Delete** button.

Understanding Directory Filters

The following table demonstrates how directory filters work and includes some uses of wildcards.

Filter - The filter applied in the Criteria tab. This can be either an Include or Exclude filter.

Pathname - The current file or directory being looked at to determine the next step of processing.

Process? - Determine if the file or directory at that pathname is a match to the applied filter. If Yes, use the Include/Exclude value of the filter to determine the final process value. If No, the directory can still be walked to look for further matches.

Walk? - Determine if the tree will be walked further down in search of a match. Files are never walked.

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Filter	Pathname	Process?	Walk?
//H1/#	//H1	No	Yes
	//H1/D1	Yes	Yes
	//H1/D1/F1	Yes	No
//H1#	//H1	No	Yes
	//H1/D1	Yes	Yes
	//H1/D1/F1	Yes	No
//H1/D1/D2/#	//H1/D1	No	Yes
	//H1/D1/D2	No	Yes
	//H1/D1/D2/D3	Yes	Yes
	//H1/D1/D2/F1	Yes	No
	//H1/D1/D2/D3/F1	Yes	No
	//H2/D1	No	No
//H1/D1	//H1/D1	Yes	Yes
	//H1/D1/F1	Yes	No
	//H1/D1/D2	Yes	No
	//H1/D1/D2/F1	No	No
//H1/*	//H1/D1	Yes	Yes
	//H1/F1	Yes	No
	//H1/D1/D2/D3	No	No
//H1/D1/D2/*	//H1/D1/D2/D3	Yes	Yes
	//H1/D1/D2/D3/D4	No	No
	//H1/D1/D2/D3/F1	No	No
	//H1/D1/D2/F1	Yes	No
	//H1	No	Yes
	//H1/D1	Yes	Yes

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H = Host

D = Directory

F = File

Understanding File Filters

The following table demonstrates how file filters work and includes some uses of wildcards. If Process? is Yes, use the Include/Exclude value of the filter to determine the final process value.

Filter - The filter applied in the Criteria tab. This can be either an Include or Exclude filter.

Pathname - The current file or directory being looked at to determine the next step of processing.

Process? - Determine if the file or directory at that pathname is a match to the applied filter. If Yes, use the Include/Exclude value of the filter to determine the final process value. If No, the directory can still be walked to look for further matches.

Walk? - Determine if the tree will be walked further down in search of a match. Files are never walked.

Filter	Pathname	Process?	Walk?
//H1/#	//H1/D1/F1	Yes	No
//H1#	//H1/D1/F1	Yes	No
//H1/D1/D2/#	//H1/D1/D2/F1	Yes	No
	//H1/D1/D2/D3/F1	Yes	No
//H1/D1/D2/*	//H1/D1/D2/D3/F1	No	No
	//H1/D1/D2/F1	Yes	No
D1	//H1/D1/F1	Yes	No
D2	//H1/D1/D2/D3/F1	Yes	No
	//H1/D1/F1	No	No

H = Host

D = Directory

F = File

Filter Examples

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If you had a directory that contained several different file types and you want to process all of the files in the directory except .jpg files, you can create an exclude filter for files with a .jpg extension. In the following example, ✗ denotes "exclude"; * (asterisk) is the wildcard symbol for "all"; .jpg is the file extension subject to the prefixed symbols. The left column lists all the directory files, the center column shows the applied filter, and the right column shows the processed files. Notice that the .jpg files are not processed.

Files in specified directory	Filter	Files that are processed
Elevator design 12502.vsd	✗*.jpg	Elevator design 12502.vsd
Elevator design rev 20502.vsd		Elevator design rev 20502.vsd
Elevator design rev 21502.vsd		Elevator design rev 21502.vsd
Part345X.xls		Part345X.xls
Part236.xls		Part236.xls
Part 532.xls		Part 532.xls
Ref-guide rev21502.doc		Ref-guide rev21502.doc
Ref-guide rev21802.doc		Ref-guide rev21802.doc
Install guide 21502.ind		Install guide 21502.ind
Illustration 532.psd		Illustration 532.psd
Illustration 236.psd		Illustration 236.psd
Vacation 1.jpg		
Vacation 2.jpg		
Vacation 3.jpg		

Filter strings can contain wildcard symbols, making the Information Repository very flexible. Use several filters together to create almost any include/exclude combination.

Using the same file set as an example, the only files processed are the .vsd and .xls files.

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Files in specified directory	Filter	Files that are processed
Elevator design 12502.vsd	✔ *.vsd	Elevator design 12502.vsd
Elevator design rev 20502.vsd	✔ *.xls	Elevator design rev 20502.vsd
Elevator design rev 21502.vsd		Elevator design rev 21502.vsd
Part345X.xls		Part345X.xls
Part236.xls		Part236.xls
Part 532.xls		Part 532.xls
Ref-guide rev21502.doc		
Ref-guide rev21802.doc		
Install guide 21502.ind		
Illustration 532.psd		
Illustration 236.psd		
Vacation 1.jpg		
Vacation 2.jpg		
Vacation 3.jpg		

ExportExtensions.cfg

Use an ExportExtensions.cfg text file to customize your export options for files that have been retrieved. This is done by configuring fields seen in export retrieval options for the Phoenix DEM search applications. This capability is intended only for advanced users.

- Create an ExportExtensions.cfg using any text editor and save as a plain text document. Once created, it needs to be added to the following path: <install-dir>\Config. See Create an ExportExtensions.cfg - example.
- ExportExtensions.cfg is a block structured text file. At the end of this section, there is a sample ExportExtensions.cfg. You can implement the file as is (at the path noted above), or modify the file to meet your own criteria and then implement it.

ExportExtensions.cfg is comprised of at least one or more ExportExtension blocks. An ExportExtension block has two main sections:

- Command
- Query

Command Section of the Export Extensions Block

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The Command section of the block extends from the words "ExportExtension" to the command specification (in the example below). It includes the ExportExtension statement that defines the beginning of an ExportExtension block and includes the execute command and other tokens:

```
ExportExtension #  This identifies the beginning of the ExportExtension block.
[ # This is the opening brace for the ExportExtension block.

    <token>=<value>
    <token>=<value>

    Command = <%# %# %# %# ... %U %M ...> # This is REQUIRED statement.
```

The following block name defines the beginning of an ExportExtension block in an ExportExtensions.cfg file:

Block name	Description
ExportExtension	The beginning of an ExportExtension block. Required.

Note that the entire block is ignored if there are fewer Query block statements than %# in the Command. For example, if you have three Query block sections and four %#, then the block will not be read.

Command	Description
Command = <*command specification*>	Define the execute command specification. Along with the command, the command line must enumerate each Query block. See the sample file below for an illustration. Required. **%#** is the substitution query value (where # is a number). Each %# enumerates a Query, one %# per Query, and can be in any order. The command specification cannot have more %# than Query statements, but you can specify certain blocks by omitting query numbers. For example, to include only query blocks 1, 3, and 7, use <%1, %3, %7> The following substitution tokens may also be in the Command specification: • %U = User • %M = Host

Command	Description
	• %D = Date • %T = Time • %P = Path to where the files are retrieved • %O = Filename containing list of files in the export list.

Use tokens to define optional functionality in the Command section. Unless noted, tokens are not necessary. When tokens are omitted, default values are used. Include any of the following tokens when you want to use non-default values:

Token/Value	Description
DeleteWhenDone = <*boolean*>	Define if files are to be deleted from the local system when the command is complete. Valid values = true | false Default = true
Description = <*character string*>	The tool tip for the label. Default = ""
DestinationPathname = <*pathname*>	The path to where the files are exported. Default = ""
FileNaming = <*alpha*>	Define how files are named. Valid values = Original | AtSelection | FilenameOnly. Default = Original
Label = "<*character string*>"	The label found in the **Export Destination** box. Default = Export Extension
Overwrite = <*alpha*>	When files are overwritten. Valid values = Never | Always | IfNewer Default = Never
RestoreSecurity = <*boolean*>	Define if original security settings are restored. Valid values = true | false

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	Default = true
RestoreTimes = <*boolean*>	Define times it is used. Valid values = true | false Default = true

Query section of the Export Extensions Block

Query block statements describe the controls that appear on the application. You may have any number of queries.

```
    Query
    [
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
    ]

    Query
    [
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
    ]
] # This is the closing brace for the ExportExtension block.
```

The following block name defines the beginning of a Query block in an ExportExtensions.cfg file.

Block name	Description
Query	The beginning of a Query block. Required

The following tokens can be used in Query blocks:

Query block Type	Valid Token/Values	Description
Checkbox	Name = "<*character string*>"	The export item's name. Required Default = ""
	Type = Checkbox	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = <*boolean*>	The value to load into the control by default. Valid values = true | false Defaults = true (checked)
	Description = "<*character string*>"	The tooltip for the control. Default = ""
Choice	Name = "<*character string*>"	The export item's name. Required Default = ""
	Type = Choice	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = <*number*>	The value to load into the control by default. Valid values = the number of the entry in the drop-down list Default = the first choice listed. If the DefaultValue for a Choice block is greater than the number of Choices entered, the entire ExportExtension block is ignored.

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Query block Type	Valid Token/Values	Description
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, and Choice only. Valid values = true | false Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""
	Choice = "<*character string*>"	A choice statement that can be selected. Must have at least one choice. Can be reused as many times as needed.
Pathname	Name = "<*character string*>"	The export item's name. Required Default = ""
	Type=Pathname	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = "<*character string*>"	The value to load into the control by default. Valid value= a string Default = ""
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, and Choice only. Valid values = true | false Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""
Spin	Name = "<*character string*>"	The export item's name.

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Query block Type	Valid Token/Values	Description
		Required Default = ""
	Type = Spin	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = <*number*>	The value to load into the control by default. Valid values = a number between the LowerLimit and UpperLimit Default = the lower limit If the DefaultValue for a Spin block is not between the LowerLimit and UpperLimit, the entire ExportExtension block is ignored.
	Description = "<*character string*>"	The tooltip for the control. Default = ""
	LowerLimit = <*number*>	The lower limit for the spin control. Default = 0
	UpperLimit = <*number*>	The upper limit for the spin control. Valid only for Spin. Default = lower limit + 100
String	Name = "<*character string*>"	The export item's name. Required Default = ""
	Type = String	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application.

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Query block Type	Valid Token/Values	Description
		Default = ""
	DefaultValue = "<*character string*>"	The value to load into the control default. Valid values = a string Defaults = ""
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, and Choice only. Valid values = true | false. Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""

A Note About Wildcards

Pay attention to brackets [ ]; there needs to be an opening bracket [after "ExportExtensions" and a closing bracket] after the last Query block.

It is best to get familiar with Phoenix DEM's wildcard characters. If you need to use a character that is used by Phoenix DEM as a wildcard, the character must be preceded by an escape character (\ ). For example, *This is an example using escape characters in a statement with a wildcard*.

The following are Phoenix DEM wildcards and special characters: **?**, *****, **#**, **!**, **~**, **^**, **&**, **[ ]**, **{ }**, \, **"**.

For more information see Wildcards.

Create an ExportExtensions.cfg - Example

1. Open a text editor, such as WordPad or Notepad, and start a new document. If using WordPad, be sure to create a Text Document (.txt) and not Rich Text Format (.rtf).

2. Copy and paste the following ExportExtensions.cfg sample file into the new document.

```
# This name is significant and identifies this as an ExportExtension block.
ExportExtension
[
    Description = "Custom"
```

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```
Label = "Custom"

# This is a REQUIRED statement in an Export Extension block.
Command = "echo %1 %2 %3 %4 %5 %6 %P %U %M %D %T"

Query
[
       Name         = "CaseName"
       Type         = String
       Label        = "Case Name"
       DefaultValue = ""
       BlankValueOk = true
       Description  = "What is the name of the case?"
]

Query
[
       Name         = "AgentName"
       Type         = Choice
       Label        = "Agent Name"
       BlankValueOk = true
       Description  = "What is the Agent's name?"
       Choice       = "John Napoli"
       Choice       = "Katie Aguilar"
       Choice       = "Justin Campbell"
]

Query
[
       Name         = "AgentId"
       Type         = Spin
       Label        = "Agent ID"
       DefaultValue = 1001
       Description  = "The ID number of the agent."
       LowerLimit   = 1000
       UpperLimit   = 5000
]

Query
[
       Name         = "CaseType"
       Type         = Choice
       Label        = "Case Type"
       Description  = "What is the case type?"
       Choice       = "Arson"
       Choice       = "Theft"
       Choice       = "Narcotics"
]

Query
[
```

```
            Name         = "APathname"
            Type         = Pathname
            Label        = "Pathname"
            DefaultValue = ""
            BlankValueOk = false
            Description  = ""
      ]

      Query
      [
            Name         = "InclueMd"
            Type         = Checkbox
            Label        = "Include content metadata?"
            DefaultValue = false
            Description  = "Include all customer metadata?"
      ]
]
```

3. Save the document to <install-dir>/Config, naming it **ExportExtensions.cfg**.
4. Launch your Phoenix DEM search application.
5. Set the Export Destination. The values for your custom export options are the same as those in your ExportExtensions.cfg file.

In ExportExtensions.cfg, backslash (\ ) is used as an escape character. Use \ whenever you type characters, such as quotation marks, that Phoenix DEM interprets as code. For example, ExportExtensions.cfg contains the following line: Sample Value for the \"How do you want to export the retrieved files?\" field. In this line, each backslash tells Phoenix DEM that the next character is literal, not a command. While ExportExtensions.cfg contains Sample Value for the \"How do you want to export the retrieved files?\", the Export Job Configuration pane displays Sample Value for the "How do you want to export the retrieved files?" (notice, no backslashes).

6. Close the application.

Once this file is created, you can go back and modify it at any time with different or additional variables. See the above sections for tokens/values to change or add.

MetadataExtensions.cfg

Create a MetadataExtensions.cfg

- Create a MetadataExtensions.cfg using any text editor, such as Notepad, Text Edit, WordPad. Be sure to create a Text Document (.txt) and not a Rich Text Format (.rtf).
- MetadataExtensions.cfg is a block structured text file.
- Once created, add it to the path: <install-dir>\Config.

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At the end of this section, find a sample MetadataExtensions.cfg. You can implement the file as is (at the path noted above) to see how it works or modify the file to meet your own criteria and then implement it.re.

Metadata Extension Block Structure

The metadata extension block structure includes three blocks (IngestMdExt, ModMdExt, and SearchMdExt). Each comprised of one or more Query blocks.

Query block statements describe the controls to appear on the application. These can include any number of string fields, checkboxes, spin controls, path name boxes, and choice controls. Each block can have any number of Query blocks. It's best to ensure that the IngestMdExt block and SearchMdExt contain the same Query blocks since only ingested metadata is searched. However, the Query blocks contained in SearchMdExt can be limited to a subset of those in IngestMdExt. In this case, you would be able to search on the Query blocks listed in SearchMdExt.

Pay attention to brackets [ ]; for IngestMdExt, ModMdExt, and SearchMdExt, there needs to be an opening bracket after "<Extension>" and a closing bracket after its last Query block.

If a Query block contains an error, the entire metadata extension block (IngestMdExt, SearchMdExt, ...) is ignored.

In the following example, note that tokens cannot be used in Query blocks indiscriminately. Each Query block supports only specific tokens. See **Valid Token/Values for Query Blocks** below for details.

```
#  This identifies the beginning of the block.
<block identifier>

# This is the opening brace for the block.
[

    Query
    [
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
    ]

    Query
    [
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
           <token>=<value>
    ]
```

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```
]
# This is the closing brace for the block.
```

Blocks

The following are the blocks used in MetadataExtensions.cfg:

Block Identifier	Description
IngestMdExt	The beginning of the metadata extensions block for Phoenix DEM ingesting and capturing applications. May not contain a SearchMdExt block or ModMdExt block. Required.
ModMdExt	The beginning of the "edit metadata" metadata extension block for Phoenix DEM search and retrieve applications. May not contain an IngestMdExt block or SearchMdExt block. Required.
SearchMdExt	The beginning of the metadata extensions block for Phoenix DEM search and retrieve applications. It may not contain an IngestMdExt block or ModMdExt block. Required.
Query	The beginning of a Query block contained within a metadata extensions block. Required. As illustrated in the examples below, Query blocks must be contained within metadata extension blocks (SearchMdExt and IngestMdExt).

Valid Token/Values for Query Blocks

The tokens in the table below can be used only in Query blocks. Although the IngestMdExt, ModMdExt, and SearchMdExt blocks use the same types of Query blocks, each must have its own individual Query blocks.

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It is best to avoid using characters that Phoenix DEM interprets as wildcards or as otherwise special. If you need to use one of these characters, then the character must be preceded by an escape character (\ ).

For example, *This is an example using escape characters in a statement with a wildcard*.

The following are wildcards and special characters: ?, *, #, !, ~, ^, &, [ ], { }, \, ". For more information see Wildcards, and Extended Metadata Processing.

Query block Type	Valid Token/Values	Description
Checkbox	Name = "<*character string*>"	The metadata item's name. Required Default = ""
	Type = Checkbox	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = <*boolean*>	The value to load into the control by default. Valid values = true | false Defaults = true (checked)
	Description = "<*character string*>"	The tooltip for the control. Default = ""
Choice	Name = "<*character string*>"	The metadata item's name. Required Default = ""
	Type = Choice	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = <*number*>	The value to load into the control by default. Valid values = the number of the entry in the drop-down list

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Query block Type	Valid Token/Values	Description
		Default = the first choice listed. If the DefaultValue for a Choice block is greater than the number of Choices entered, the entire MetadataExtensions block is ignored.
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, Date, and Choice only. A red asterisk will be displayed if this value is set to false. Valid values = true | false Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""
	Choice = "<*character string*>"	A choice statement that can be selected. Must have at least one choice. Can be reused as many times as needed to create multiple choices to choose from.
	EditableChoice = <*boolean*>	Allow the user to edit a choice option. Valid values = true | false Default = false
Date	Name = "<*character string*>"	The metadata item's name. Required Default = ""
	Type = Date	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = "<*character string*>"	The value to load into the control by default.

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Query block Type	Valid Token/Values	Description
		Valid value = "" | "today" to insert today's date | "yyyy/mm/dd" for a chosen date Default = ""
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, Date, and Choice only. A red asterisk will be displayed if this value is set to false. Valid values = true | false Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""
Pathname	Name = "<*character string*>"	The metadata item's name. Required Default = ""
	Type = Pathname	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = "<*character string*>"	The value to load into the control by default. Valid value = a string Default = ""
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, Date, and Choice only. A red asterisk will be displayed if this value is set to false. Valid values = true | false Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""

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Query block Type	Valid Token/Values	Description
Spin	Name = "<*character string*>"	The metadata item's name. Required Default = ""
	Type = Spin	The Query type.
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = <*number*>	The value to load into the control by default. Valid values = a number between the LowerLimit and UpperLimit Default = the lower limit If the DefaultValue for a Spin block is not between the LowerLimit and UpperLimit, the entire MetadataExtensions block is ignored.
	Description = "<*character string*>"	The tooltip for the control. Default = ""
	LowerLimit = <*number*>	The lower limit for the spin control. Default = 0
	UpperLimit = <*number*>	The upper limit for the spin control. Valid only for Spin. Default = lower limit + 100
String	Name = "<*character string*>"	The metadata item's name. Required Default = ""
	Type = String	The Query type.

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Query block Type	Valid Token/Values	Description
	Label = "<*character string*>"	The label for the control as it will appear in the application. Default = ""
	DefaultValue = "<*character string*>"	The value to load into the control default. Valid values = a string Defaults = ""
	BlankValueOk = <*boolean*>	Indicate if the value is left blank. Valid for String, Pathname, Date, and Choice only. A red asterisk will be displayed if this value is set to false. Valid values = true | false Default = true
	Description = "<*character string*>"	The tooltip for the control. Default = ""
	NumLines = <*number*>	This value is the number of lines displayed for the textbox when using the string query. Use for multi-line metadata values. Default = 1 This token is only for use with the IngestMdExt and ModMdExt sections.

Sample of Generic MetadataExtensions.cfg

```
# This name is significant and identifies this as an Metadata Extension block.
IngestMdExt
[
 Query
 [
      Name          = "CaseName"
      Type          = String
      Label         = "Case Name"
```

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```
     DefaultValue = ""
     BlankValueOk = true
     Description  = "What is the name of the case?"
          NumLines     = 2
]

Query
[
     Name         = "AgentName"
     Type         = Choice
     Label        = "Agent Name"
          BlankValueOk = true
     Description  = "What is the Agent's name?"
     Choice       = "John Napoli"
     Choice       = "Katie Aguilar"
     Choice       = "Justin Campbell"
          EditableChoice = true
]

Query
[
     Name         = "AgentId"
     Type         = Spin
     Label        = "Agent ID"
     DefaultValue = 1001
     Description  = "The ID number of the agent."
     LowerLimit   = 1000
     UpperLimit   = 5000
]

Query
[
     Name         = "CaseType"
     Type         = Choice
     Label        = "Case Type"
     Description  = "What is the case type?"
     Choice       = "Arson"
     Choice       = "Theft"
     Choice       = "Narcotics"
]

Query
[
          Name         = "A Pathname"
          Type         = Pathname
          Label        = "Pathname"
```

```
          DefaultValue = ""
          BlankValueOk = false
          Description  = ""
]

Query
[
     Name         = "InclueMd"
     Type         = Checkbox
     Label        = "Include content metadata?"
     DefaultValue = false
     Description  = "Include all customer metadata?"
]
]
# This name is significant and identifies this as a Search Criteria Extensions
block.
SearchMdExt
[
   Query
[
     Name         = "CaseName"
     Type         = String
     Label        = "Case Name"
     DefaultValue = ""
     BlankValueOk = true
     Description  = "What is the name of the case?"
]

Query
[
     Name         = "AgentName"
     Type         = Choice
     Label        = "Agent Name"
          BlankValueOk = true
     Description  = "What is the Agent's name?"
     Choice       = "John Napoli"
     Choice       = "Katie Aguilar"
     Choice       = "Justin Campbell"
          EditableChoice = true
]

Query
[
     Name         = "AgentId"
     Type         = Spin
     Label        = "Agent ID"
     DefaultValue = 1001
```

```
     Description  = "The ID number of the agent."
     LowerLimit   = 1000
     UpperLimit   = 5000
]

Query
[
     Name         = "CaseType"
     Type         = Choice
     Label        = "Case Type"
     Description  = "What is the case type?"
     Choice       = "Arson"
     Choice       = "Theft"
     Choice       = "Narcotics"
]

Query
[
          Name         = "A Pathname"
          Type         = Pathname
          Label        = "Pathname"
          DefaultValue = ""
          BlankValueOk = false
          Description  = ""
]

Query
[
     Name         = "InclueMd"
     Type         = Checkbox
     Label        = "Include content metadata?"
     DefaultValue = false
     Description  = "Include all customer metadata?"
]
]

# This name is significant and identifies this as a Search Criteria Extensions
block.
DataServicesMdExt
[
   Query
[
     Name         = "CaseName"
     Type         = String
     Label        = "Case Name"
     DefaultValue = ""
     BlankValueOk = true
     Description  = "What is the name of the case?"
```

```
]

Query
[
     Name         = "AgentName"
     Type         = Choice
     Label        = "Agent Name"
          BlankValueOk = true
     Description  = "What is the Agent's name?"
     Choice       = "John Napoli"
     Choice       = "Katie Aguilar"
     Choice       = "Justin Campbell"
          EditableChoice = true
]

Query
[
     Name         = "AgentId"
     Type         = Spin
     Label        = "Agent ID"
     DefaultValue = 1001
     Description  = "The ID number of the agent."
     LowerLimit   = 1000
     UpperLimit   = 5000
]

Query
[
     Name         = "CaseType"
     Type         = Choice
     Label        = "Case Type"
     Description  = "What is the case type?"
     Choice       = "Arson"
     Choice       = "Theft"
     Choice       = "Narcotics"
]

Query
[
          Name         = "A Pathname"
          Type         = Pathname
          Label        = "Pathname"
          DefaultValue = ""
          BlankValueOk = false
          Description  = ""
]
```

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```
Query
[
     Name         = "InclueMd"
     Type         = Checkbox
     Label        = "Include content metadata?"
     DefaultValue = false
     Description  = "Include all customer metadata?"
]
]
```

Site.cfg

Use a Site.cfg file to work remotely on a network subnet that does not have multicast capabilities. Not having multicast will prevent the Phoenix DEM Locator Service on your local client machine from seeing vaults in Vault Admin and from viewing search results inDigital Evidence Manager. This capability is intended only for advanced users.

- Create a Site.cfg using any text editor and save as a plain text document. Once created, it needs to be added to the following path: <install-dir>\Config.
- Site.cfg is a block structured text file. At the end of this section, there is a sample Site.cfg. You will need to modify the file to meet your own criteria before implementing it.

Site.cfg is comprised of at least one or more policy_name blocks, each is for a remote site.

- The policy_name field is for information use. It can be set to anything but it must exist.
- The version and type fields must be set as shown in the table below.
- You can place as many remote site blocks into the file as you need.

Everything is case sensitive, including the filename (Site.cfg).

Block name	Valid Token/Values	Description
policy_name = "<*policy name*>"	version = "1.0"	The value for version must be set to "1.0". Required
	type = "sitecfg"	The value for type must be set to "sitecfg". Required.
	ip_address = "<*IP address*>"	The IP address for the remote site that you are trying to access.

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Block name	Valid Token/Values	Description
		Required.
	description = "<*character string*>"	The label for the control as it will appear in the application. Valid values = a string Required.

Create a Site.cfg - Example

1. Open a text editor, such as WordPad or Notepad, and start a new document. If using WordPad, be sure to create a Text Document (.txt) and not Rich Text Format (.rtf).

2. Copy and paste the following Site.cfg sample file into the new document.

```
policy_name = "DSM-NVR"
[
        version          = "1.0"
        type             = "sitecfg"
        ip_address       = "172.16.42.28"
        description      = "DSM-NVR"
]

policy_name = "IC-NVR"
[
        version          = "1.0"
        type             = "sitecfg"
        ip_address       = "172.16.153.18"
        description      = "IC-NVR"
]

policy_name = "QC-NVR"
[
        version          = "1.0"
        type             = "sitecfg"
        ip_address       = "172.16.138.18"
        description      = "QC-NVR"
]

policy_name = "WL-NVR"
[
        version          = "1.0"
        type             = "sitecfg"
        ip_address       = "172.16.90.18"
        description      = "WL-NVR"
]
```

3. Save the document to <install-dir>/Config, naming it **Site.cfg**.

4. Launch your Phoenix DEM Vault AdminDigital Evidence Manager.

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5. While the splash screen is being displayed, a **Remote Site** dialog box will pop-up and be displayed. Choose your remote site from the drop-down list.
    - **Local Network** is a default choice and is always available.
6. Click **OK** to continue opening your application.

Once this file is created, you can go back and modify it at any time with different or additional policy names for remote sites. See the above sections for tokens/values to change.

Key Configurations

Phoenix DEM enables you to use special settings to modify its default functionality. These settings are called "keys." It is important to note that a Windows operating system uses keys differently than a Linux or Mac operating system.

- Windows 32-bit - Keys for customizing functionality are located in the Registry at <Local Machine>\Software\SoleraTec\Phoenix.
- Windows 64-bit - Keys for customizing functionality are located in the Registry at <Local Machine>\Software\Wow6432Node\SoleraTec\Phoenix.
- Linux - A file at /etc/SoleraTec/Keys.conf is created when it is installed.
- Mac - A file at /Applications/SoleraTec/Keys.conf is created when it is installed.

Keys.conf File Format (Linux and Mac Only)

- One key per line.
- Line is terminated by a new line character <NEWLINE> or end of file <EOF>.
- Fields in line are delimited by <TAB> or <SPACE>.

Keys.conf Line Format

<Name><TAB>**<Type>**<TAB>**<Length>**<TAB>**<Value>[\n,EOF]**

- **<Name>** is limited to 1024 characters.
- **<Type>** As specified in table below.
- **<Length>** As specified in table below.
- **<Value>** format depends on the type of data:
    - **Char:** The value is read as a character string.
    - **Int32:** The value is read as a 32 bit signed integer.
    - **Binary:** The value is read as a series of bytes with each byte represented by a hex pair with a single space between each byte.

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Keys.conf Line Format Examples

- key_name_1<TAB>Char<TAB>18<TAB>this is a char key<NEWLINE>
- key_name_2<SPACE>Int32<SPACE>4<SPACE>1234<NEWLINE>
- key_name_4<TAB>Binary<TAB>14<TAB>1a 2e f1 20 9d<EOF>

Keys

By default, only the **InstallRoot** key is included when Phoenix DEM is installed.

Key
Name: CameraCacheDir **Description:** Specifies a location where Phoenix DEM applications may store temporary video captured directly from cameras. **Default:** <Product Installation Directory>/VideoCache **Used by:** All Phoenix DEM Extension applications **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of directory **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of directory **Sample Usage:** CameraCacheDir Char 13 C:/VideoCache
Name: CCExtractorPathname **Description:** Pathname of the executable used to extract closed caption data from video. **Default:** Windows: <Product Installation Directory>\Bin\CCExtractor.exe Non-Windows: <Product Installation Directory>/Bin/CCExtractor

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Key
Used by: Target and Process **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of executable **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of executable **Sample Usage:** CCExtractorPathname Char 14 C:/MyExtractor
Name: CntMaxTermsPerDoc **Description:** Specifies the maximum number of terms that will be scanned for content keyword generation in a single file. **Default:** 10485760 **Used by:** Vault **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Limit in number of terms **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Limit in number of terms **Sample Usage:** CntMaxTermsPerDoc Int32 4 5000
Name: CntTextExtList **Description:** Specifies which files will be considered text files and thus scanned for content. **Default:** doc;txt;cfg;cpp;c;cc;cxx;h;dsw;exc;hpp;rtf;htm;html;hxx;log;mk;ppt;rc;sln;vbvbs;bat;xls;xml;sh;cshrc;shrc **Used by:** Vault **Windows Registry Settings:**

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Key
Key Type: String value **Value:** <text extension list>: <text extension>[SEMI-COLON <text extension>]* <text extension>: <string of characters> **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** <text extension list>: <text extension>[SEMI-COLON <text extension>]* <text extension>: <string of characters> **Sample Usage:** CntTextExtList Char 11 doc;bat;cpp
Name: CntTermsLimit **Description:** Specifies the amount of a file scanned for content keyword generation. **Default:** 10485760 **Used by:** Vault **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Limit in bytes **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Limit in bytes **Sample Usage:** CntTermsLimit Int32 4 1024
Name: DataServicesSvcPriority **Description:** Set process priority of DataServicesSvc. **Default:** standard **Used by:** DataServicesSvc **Windows Registry Settings:**

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Key
Key Type: String Value **Value:** low, standard, high **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** low, standard, high **Sample Usage:** DataServicesSvcPriority Char 4 high
Name: DbSyncIntOps **Description:** Number of operations between syncing database to disk. A value of zero will disable all sync operations. **Default:** 10000 **Used by:** VaultSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Number of operations **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Number of operations **Sample Usage:** DbSyncIntOps Int32 4 10246
Name: DoBroadcast **Description:** Enable broadcast of events and messages such as location of Vaults and Vault startup/shutdown. **Default:** 1 (true) **Used by:** VaultSvc, TgtProcSvc, LocSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 0 (false) or 1 (true) **Keys.conf Format:**

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Key
Type: Int32 **Length:** 4 **Value:** 0 (false) or 1 (true) **Sample Usage:** DoBroadcast Int32 4 1
Name: DoMulticast **Description:** Enable multicast of events and messages such as location of Vaults and Vault startup/shutdown. **Default:** 1 (true) **Used by:** VaultSvc, TgtProcSvc, LocSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 0 (false) or 1 (true) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 0 (false) or 1 (true) **Sample Usage:** DoMulticast Int32 4 1
Name: FfmbcExePathname **Description:** Pathname to ffmbc executable. **Default:** <install-dir>/Bin/ffmbc.exe **Used by:** VideoComponentsGen **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of executable **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of the executable

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Key
Sample Usage: FfmbcExePathname Char 14 C:/MyFfmbc.exe
Name: FfmpegExePathname **Description:** Pathname to ffmpeg executable. **Default:** <install-dir>/Bin/ffmpeg.exe **Used by:** VideoComponentsGen **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of executable **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of executable **Sample Usage:** FfmpegExePathname Char 15 C:/MyFfmpeg.exe
Name: FfmpegJoinExePathname **Description:** Pathname to joining version of ffmpeg executable. **Default:** <install-dir>/Bin/ffmpeg_v112.exe **Used by:** VideoComponentsGen **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of executable **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of executable **Sample Usage:** FfmpegJoinExePathname Char 15 C:/MyJoiner.exe
Name: InstallRoot **Description:** The location of /Phoenix directory. **Default:** /usr/local/Phoenix

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Key
Used by: All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of the root directory **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of the root directory **Sample Usage:** InstallRoot Char 18 /usr/local/Phoenix
Name: IpAddressList **Description:** Restricts TCP addresses that are used when the computer has multiple network connections. **Default:** Addresses of all network connections **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** <address list>: <address>[COMMA <address>]* <address>: <xx.xx.xx.xx>/<mask> **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** <address list>: <address>[COMMA <address>]* <address>: <xx.xx.xx.xx>/<mask> **Sample Usage:** IpAddressList Char 40 192.168.1.0/ffffff00,127.0.0.1/ffffff00
Name: LfrMaxFileSizeBytes **Description:** Specifies the maximum file size in bytes for log file rotation.

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Key
Setting a value that is less than the default value could result in slower system operation. **Default:** 10485760 (10MB) **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Limit in bytes, greater than zero **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Limit in bytes, greater than zero **Sample Usage:** LfrMaxFileSizeBytes Int32 4 10485760
Name: LfrMaxNumFiles **Description:** Specifies the maximum number of files to keep during log file rotation.   Setting a value that is less than the default value could result in slower system operation. **Default:** 2 **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Limit in number of files, greater than 1 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Limit in number of files, greater than 1 **Sample Usage:** LfrMaxNumFiles Int32 4 2
Name: LfrCheckIntervalSec

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Key
Description: Specifies the check interval in seconds for log file rotation.   Setting a value that is less than the default value could result in slower system operation. **Default:** 3600 (1 hour) **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Interval in seconds, greater than zero **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Interval in seconds, greater than zero **Sample Usage:** LfrCheckIntervalSec Int32 4 3600
Name: LocSvcPriority **Description:** Set process priority of LocSvc. **Default:** standard **Used by:** LocSvc **Windows Registry Settings:** **Key Type:** String Value **Value:** low, standard, high **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** low, standard, high **Sample Usage:** LocSvcPriority Char 4 high
Name: MediaPlayerDefaultVolume **Description:** Specifies the initial volume setting when playing video. **Default:** 50

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Key
Used by: Video Content Manager, Surveillance Video Manager, Live Viewer **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Volume, greater than zero **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Volume, greater than zero **Sample Usage:** MediaPlayerDefaultVolume Int32 4 50
Name: MulticastAddress **Description:** Specifies the multicast address used when various components communicate. **Default:** 224.0.23.160 **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** IP address **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** IP address **Sample Usage:** MulticastAddress Char 12 226.0.19.156
Name: MulticastIfcAddress **Description:** Indicates which interface on host machine will be used to send out multicast packets: • If a complete address is given, the network interface corresponding to that address will be used for sending multicast packets. • If an address and mask are specified, the first network interface that matches the non-masked portion of the specified address will be used.

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Key
Using a mask enables a network interface to be specified by network address. Using a mask avoids errors when the network interface changes address through the use of DHCP. **Default:** Interface chosen by host machine **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** <xx.xx.xx.xx> or <xx.xx.xx.xx>/<mask> **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** <xx.xx.xx.xx> or <xx.xx.xx.xx>/<mask> **Sample Usage:** MulticastIfcAddress Char 20 192.168.1.0/ffffff00
Name: MulticastTtl **Description:** Specifies the multicast TTL (Time To Live) value. **Default:** 255 **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** DWORD value **Value:** TTL value **Keys.conf Format:** **Type:** Int32 in the range of 0 - 255 **Length:** 4 **Value:** TTL value **Sample Usage:** MulticastTtl Int32 4 10
Name: NotifyClearCmd **Description:** Command to execute when clearing an error condition. Used for notification.

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Key
Default: none **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname to the batch file **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname to the batch file **Sample Usage:** NotifyClearCmd Char 27 C:/MyNotificationScript.bat
Name: NotifySetCmd **Description:** Command to execute when clearing an error condition. Used for notification. **Default:** none **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname to the batch file **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname to the batch file **Sample Usage:** NotifySetCmd Char 27 C:/MyNotificationScript.bat
Name: PictureExtList **Description:** Specifies which files will be considered picture files and therefore processed as picture files when option is enabled in Target and Process Policies (if enabled) or manual Target and Process jobs (if enabled). **Default:** bmp;gif;jpeg;jpg;pict;pct;png;raw;tif;tiff

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Key
Used by: Target and Process, Target and Process Policies, Target and Process Service **Windows Registry Settings:** **Key Type:** String value **Value:** <picture extension list>: <picture extension>[SEMI-COLON <picture extension>]* <picture extension>: <string of characters> **Keys.conf Format:** **Type:** Char **Length:** Number of characters in picture **Value:** <picture extension list>: <picture extension>[SEMI-COLON <picture extension>]* <picture extension>: <string of characters> **Sample Usage:** PictureExtList Char 11 bmp;gif;jpg
Name: PrimaryNicName **Description:** Defines the NIC (Network Interface Card) which is used as the primary interface. **Default:** In Linux, the primary network interface card (NIC) is chosen by looking for the first non-zero IP address, "Up" device eth0, eth1, eth2, ... If none found, then first device as shown in "ifconfig -a". Apple is same as Linux except uses device names en0, en1, en2, ... Windows is chosen using the first non-zero, "Enabled" NIC in the list shown in the Advanced Settings dialog box in the Network Connections window. Open Network Connections and Advanced Settings option in the Advanced menu. In all cases above, the Local Loopback device is only chosen if no other device is available. **Used by:** All Phoenix DEM applications. **Windows Registry Settings:** **Key Type:** String value

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Key
Value: Network Interface Description **Keys.conf Format:** **Type:** Char **Length:** Number of characters in value **Value:** Network Interface Name **Sample Usage:** PrimaryNicName Char 4 eth0
Name: RccMinVideoSizeBytes **Description:** Minimum size that a RTSP recorded video file must have to be considered valid, in bytes. **Default:** 10240 **Used by:** TgtProcSvc **Windows Registry Settings:** **Key Type:** DWORD **Value:** Size in bytes **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Size in bytes **Sample Usage:** RccMinVideoSizeBytes Int32 4 8192
Name: RestrictedPortsList **Description:** Restricts TCP port usage to a set or range. **Default:** Use all ports **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** <ranges>: <range> [COMMA <range>]* <range>: <port-low> HYPHEN <port-high>

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Key
Keys.conf Format: **Type:** Char **Length:** Number of characters in Value **Value:** <ranges>: <range> [COMMA <range>]* <range>: <port-low> HYPHEN <port-high> **Sample Usage:** RestrictedPortsList Char 20 5000-5110,5500-5521
Name: SarAdvancedFeaturesEnable **Description:** Enables metadata editing, file grouping, file purging, and file protection settings editing via Search and Retrieve. **Default:** 0 (disabled) **Used by:** Search and Retrieve **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 0 (disabled) or 1 (enabled) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 0 (disabled) or 1 (enabled) **Sample Usage:** SarAdvancedFeaturesEnable Int32 4 1
Name: SarNoDelFilesInSearch **Description:** When set to "1" for either host or user, it will not allow the user to make the choice to include deleted files in their searches. **Default:** 0 (disabled) **Used by:** Search and Retrieve **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 0 (disabled) or 1 (enabled) **Keys.conf Format:**

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Key
Type: Int32 **Length:** 4 **Value:** 0 (disabled) or 1 (enabled) **Sample Usage:** SarNoDelFilesInSearch Int32 4 1
Name: SarPurgeFeatureEnable **Description:** When set to "1" for either host or user, it will allow the user to use the Purge functionality in Search and Retrieve. **Default:** 0 (disabled) **Used by:** Search and Retrieve **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 0 (disabled) or 1 (enabled) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 0 (disabled) or 1 (enabled) **Sample Usage:** SarPurgeFeatureEnable Int32 4 1
Name: TapeFsGetIntSec **Description:** Interval in seconds at which a tape drive is queried for remaining free space on the current tape. Minimum is 2 seconds. **Default:** 10 **Used by:** VaultSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Interval in seconds, greater than or equal to 2 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Interval in seconds, greater than or equal to 2

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Key
Sample Usage: TapeFsGetIntSec Int32 4 10
Name: TapeMinBlockSizeKB **Description:** Sets the minimum block size for data written to tape. **Default:** 48 **Used by:** VaultSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Block size **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Block size **Sample Usage:** TapeMinBlockSizeKB Int32 4 48
Name: TapUseHardLink **Description:** Specifies the use of hard links and applies only to "move" operations where the camera cache is located on the same file system as the destination storage media. **Default:** 0 (false) **Used by:** TgtProcSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 0 (false) or 1 (true) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 0 (false) or 1 (true) **Sample Usage:** TapUseHardLink Int32 4 1
Name: TapVideoCaptureWriteBufferSizeKB

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Key
Description: Sets the video capture write buffer size in kilobytes. If zero, then use system buffer setting. **Default:** 0 **Used by:** TgtProcSvc **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 0 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 0 **Sample Usage:** TapVideoCaptureWriteBufferSizeKB Int32 4 0
Name: TempDir **Description:** Specifies a location where Phoenix DEM applications may store temporary files. **Default:** Windows: Documents and Settings/<user>/Local Settings/Temp Non-Windows: /tmp **Used by:** All Phoenix DEM applications **Windows Registry Settings:** **Key Type:** String value **Value:** Pathname of directory **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of directory **Sample Usage:** TempDir Char 7 C:/tmp
Name: TgtProcSvcPriority **Description:** Set process priority of TgtProcSvc.

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Key
Default: standard **Used by:** TgtProcSvc **Windows Registry Settings:** **Key Type:** String Value **Value:** low, standard, high **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** low, standard, high **Sample Usage:** TgtProcSvcPriority Char 4 high
Name: VaultSvcPriority **Description:** Set process priority of VaultSvc. **Default:** standard **Used by:** VaultSvc **Windows Registry Settings:** **Key Type:** String Value **Value:** low, standard, high **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** low, standard, high **Sample Usage:** VaultSvcPriority Char 4 high
Name: VideoClipGenPathname **Description:** Pathname of executable to create a clip of a video file. **Default:** <install-dir>/Bin/VideoComponentsGen.exe **Used by:** VaultSvc **Windows Registry Settings:** **Key Type:** String value

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Key
Value: Pathname of executable **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname of executable **Sample Usage:** VideoClipGenPathname Char 16 C:/MyClipper.exe
Name: VideoComponentsGenBackend **Description:** VideoComponentsGen's backend package to use. **Default:** quicktime **Used by:** Target and Process, TgtProcSvc, Video Content Manager, Surveillance Video Manager **Windows Registry Settings:** **Key Type:** String value **Value:** quicktime **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** quicktime **Sample Usage:** VideoComponentsGenBackend Char
Name: VideoComponentsGenMaxInstances **Description:** The number of transcoding processes that can be run simultaneously. It can be represented in several different formats: = : Use the number of cores (default) 0 : Unlimited n : Use this number explicitly *n : Multiply the number of cores by n /n : Divide the number of cores by n +n : Add n to the number of cores -n : Subtract n from the number of cores **Default:** = **Used by:** Target and Process, TgtProcSvc, Video Content Manager, Surveillance Video Manager

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Key
Windows Registry Settings: **Key Type:** String value **Value:** Number of transcoding processes **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Number of transcoding processes **Sample Usage:** VideoComponentsGenMaxInstances Char 2 +6
Name: VideoComponentsGenMaxThreads **Description:** The number of threads that can be used by each transcoding process. A value of 0 (default) indicates that the number of threads will not be restricted but will instead be left to the transcoding engine. **Default:** 0 **Used by:** Target and Process, TgtProcSvc, Video Content Manager, Surveillance Video Manager **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 0 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 0 **Sample Usage:** VideoComponentsGenMaxThreads Int32 4 0
Name: VideoComponentsGenPathname **Description:** Pathname of executable to create a thumbnail or low res proxy. **Default:** <install-dir>/Bin/VideoComponentsGen.exe **Used by:** Target and Process, TgtProcSvc, Video Content Manager, Surveillance Video Manager **Windows Registry Settings:**

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Key
Key Type: String value **Value:** Pathname to executable **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** Pathname to executable **Sample Usage:** VideoComponentsGenPathname Char 17 C:/MyVideoGen.exe
Name: VideoComponentsGenPictWidthLow **Description:** Specifies the picture thumbnail target width, in pixels, for the low quality setting. **Default:** 100 **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 1 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 1 **Sample Usage:** VideoComponentsGenPictWidthLow Int32 4 200
Name: VideoComponentsGenPictHeightLow **Description:** Specifies the picture thumbnail target height, in pixels, for the low quality setting. **Default:** 100 **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 1 **Keys.conf Format:**

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Key
Type: Int32 **Length:** 4 **Value:** Minimum of 1 **Sample Usage:** VideoComponentsGenPictHeightLow Int32 4 200
Name: VideoComponentsGenPictQualLow **Description:** Specifies the picture thumbnail image quality for the low quality setting. **Default:** 2 **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 1 (worst) – 10 (best) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 1 (worst) – 10 (best) **Sample Usage:** VideoComponentsGenPictQualLow Int32 4 3
Name: VideoComponentsGenPictWidthMed **Description:** Specifies the picture thumbnail target width, in pixels, for the medium quality setting. **Default:** 320 **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 1 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 1

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Key
Sample Usage: VideoComponentsGenPictWidthMed Int32 4 400
Name: VideoComponentsGenPictHeightMed **Description:** Specifies the picture thumbnail target height, in pixels, for the medium quality setting. **Default:** 240 **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 1 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 1 **Sample Usage:** VideoComponentsGenPictHeightMed Int32 4 400
Name: VideoComponentsGenPictQualMed **Description:** Specifies the picture thumbnail image quality for the medium quality setting. **Default:** 5 **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** 1 (worst) – 10 (best) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 1 (worst) – 10 (best) **Sample Usage:** VideoComponentsGenPictQualMed Int32 4 3
Name: VideoComponentsGenPictWidthHigh

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Key
Description: Specifies the picture thumbnail target width, in pixels, for the high quality setting. **Default:** Original picture width **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 1 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 1 **Sample Usage:** VideoComponentsGenPictWidthHigh Int32 4 600
Name: VideoComponentsGenPictHeightHigh **Description:** Specifies the picture thumbnail target height, in pixels, for the high quality setting. **Default:** Original picture height **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Minimum of 1 **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Minimum of 1 **Sample Usage:** VideoComponentsGenPictHeightHigh Int32 4 600
Name: VideoComponentsGenPictQualHigh **Description:** Specifies the picture thumbnail image quality for the high quality setting. **Default:** 7 **Used by:** Target and Process Service

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Key
Windows Registry Settings: **Key Type:** DWORD value **Value:** 1 (worst) – 10 (best) **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** 1 (worst) – 10 (best) **Sample Usage:** VideoComponentsGenPictQualHigh Int32 4 3
Name: VideoComponentsGenPriority **Description:** Set process priority of VideoComponentsGen. **Default:** standard **Used by:** VideoComponentsGen **Windows Registry Settings:** **Key Type:** String Value **Value:** low, standard, high **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** low, standard, high **Sample Usage:** VideoComponentsGenPriority Char 4 high
Name: VideoExtList **Description:** Specifies which files will be considered video files and therefore processed as video files when option is enabled in Target and Process Policies (if enabled) or manual Target and Process jobs (if enabled). **Default:** 3g2;3gp;avi;divx;f4v;fbr;flv;m4v;mkv;mov;mp4;mpg;mpg2;mts;mxf;qt;rm;swf;vob;wmv;xvid **Used by:** Target and Process Service **Windows Registry Settings:** **Key Type:** String value

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Key
Value: <video extension list>: <video extension>[SEMI-COLON <video extension>]* <video extension>: <string of characters> **Keys.conf Format:** **Type:** Char **Length:** Number of characters in Value **Value:** <video extension list>: <video extension>[SEMI-COLON <video extension>]* <video extension>: <string of characters> **Sample Usage:** VideoExtList Char 11 mpg;mxf;mov
Name: VltPrefetchQueLen **Description:** Sets the limit for the number of 128K blocks which are initially read from a file when opened for transfer. This value will be reduced if the file is smaller or the device cache size is smaller. **Default:** 10 **Used by:** Vault Service **Windows Registry Settings:** **Key Type:** DWORD value **Value:** Number of 128K blocks initially read **Keys.conf Format:** **Type:** Int32 **Length:** 4 **Value:** Number of 128K blocks initially read **Sample Usage:** VltPrefetchQueLen Int32 4 10

Command Line Arguments

The command line arguments are intended for advanced users of Phoenix DEM. Use the command line interface only if you are familiar with command line environments, otherwise, use a Phoenix DEM application.

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In Phoenix DEM, command line refers to command line interpreter based Phoenix DEM applications or the line in a command line interpreter where you can type commands. The command line applications provide an alternative way for executing functionality for Phoenix DEM applications.

There are distinct ways to use command line utilities:

- There are several command line executables for desktop client components available with your suite of product applications - for example, VaultAdminCl.exe. These executables with the "Cl" included at the end of the name are completely interactive and offer another way to execute an application's default functionality. This is useful if you have scripts to run or diagnostics work to do. At the command line prompt, if you type **help**, a list of commands appear for you to interact with the application.

  For more information see Locator Admin Command Line, Vault Admin Command Line, Target and Process Command Line, Search and Retrieve Command Line, and Data Services Command Line.

- Some server components are service applications that run behind the scenes and can be accessed through command line arguments. An advanced user could modify these to allow for additional options to run with the services (other than defaults), or to perform diagnostics on the program. To see a list of available options for a command line utility, use **<executable name> -usage** at the command line prompt.

  For more information see Vault Service, Target and Process Service, and Data Services Service.

Locator Admin Command Line

The LocAdminCl keeps track of resources, such as Vaults, in the Information Repository.

- Access **LocAdminCl** from your suite of application products.

Command Line Options

As needed, append the following options to the application execution path. You can enter a single option, a single option and -usage or -version, or a combination of several options and -usage or -version.

The command line is formed as follows:

```
LocAdminCl <option> <option> . . .
```

- **-input_pathname <pathname>** - Contains the input list of commands.
- **-output_pathname <pathname>** - Define the path to the file containing the output results.
- **-usage** - List all valid parameters.
- **-version** - Display the current version information.

Interactive Commands and their Arguments

After starting the application, you can enter the following arguments at the prompt.

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Argument	Description
advanced <*boolean*>	Set or view advanced mode setting. Valid values = on | off Default = off
broadcast	Register a test entry by broadcast in all global maps. Available only in advanced mode.
find <*seconds*>	Find all Locator Services on network and determine how long to wait for responses from other Locator Services on the network. Valid Values = 1 - ∞
format <*alpha*>	Set or view address format. Valid values = • dot • host • full
help | ?	Print usage information for all commands.
host <*hostname*>	Set or view default host setting.
list <*hostname*>	List entries in locator at <hostname<. In advanced mode, displays extended output.
quit	Exit the application.
register <*hostname*>	Register a test entry in global map at <hostname>. Appears only in advanced mode.
shut <*hostname*>	Shuts down the Locator Service at <hostname>. Available only in advanced mode.
status	Print current settings.
timeout <*number*>	Set or view communications timeout value. Valid values = 0 - 9.

For more information see Vault Management, Command Line Arguments, and Locator Service.

Locator Service

The Locator Service makes dynamic resource allocation possible in Phoenix DEM, which delivers unlimited

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storage resource accessibility within the network. It is the tool which locates and provides communication between clients and Vaults, enabling them to work like a traditional client/server system but without the need for hard-coded static links between clients and servers. In contrast, the Locator architecture is flexible to allow dynamic client access to any storage resource on your network.

The Locator maintains a list of currently available Phoenix DEM services, by using a multicast and beacon technology, and it provides this list to clients on the network as needed. To accomplish this, the Locator constantly "listens" for active registered Vaults. The Locator list notes Vault status and location changes. Every Locator is self-propagating and shares information with other Locators within the Information Repository.

For more information see Command Line Arguments.

Vault Admin Command Line

Use VaultAdminCl to manage media and Vaults in your Information Repository.

To execute Vault Admin tasks, ensure that the folder where Phoenix DEM is installed is in your command path, open a command prompt, and run VaultAdminCl at the command line. As needed, use the commands listed below. For more information see Vault Admin and Command Line Arguments.

- Access **VaultAdminCl** from your suite of application products.

Command Line Options

As needed, append the following options to the execution path. When you run VaultAdminCl, the command line is formed as follows:

```
VaultAdminCl <option>
```

- **-input_pathname <pathname>** - Contains the input list of commands.
- **-output_pathname <pathname>** - Define the path to the file containing the output results.
- **-usage** - List all valid parameters.
- **-version** - Display the current version information.

Interactive Commands and their Arguments

After starting the application, type the following arguments to the command line prompt one at a time. When entering arguments, you can simultaneously enter required variables or enter just a given argument and wait for the system to prompt you for its required variables.

Argument	Description
clist	List all current clients for the selected Vault.

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Argument	Description
close	Close the connection to the selected Vault.
diag	Set the diagnostic mode for the selected Vault.
drives	List drives for selected Vault.
dstat <*drive name*>	Display information about a selected drive. If the name is not listed on the command line, it asks to provide the name.
errorlog <*pathname*>	Set the Vault's error log path. Valid values: • pathname - New error log path.
format <*notation type*>	Set the current client address format. Valid notations: • dot - Client computer network address is displayed. • host - Client computer name is displayed along with domain and subnet names. • full - Client's host name and port number are displayed.
help | ?	Show valid usages for commands. Use only one command at a time.
license <*pathname*>	Set the path for Information Repository license. Valid values: • pathname - New path name to the license file.
load <*argument*>	Load the media for the selected Vault. Arguments for a tape Vault with a mailslot: • load from mailslot? <yes | no> • if loading from mailslot, mailslot loc • if not loading from mailslot, storage loc • force reindex of media? <yes | no> Arguments for a tape Vault with no mailslot:

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Argument	Description
	• storage loc • force reindex of media? <yes | no> Arguments for a hard disk Vault: • media name • media in default location? <yes | no> • if not in a default location, pathname • force reindex of media? <yes | no>
media	List the media for the selected Vault.
mstat <*name*>	Display media status. • name - Name of the media to display.
name <*name*>	Set the name for the selected Vault. Valid values: • name – New name for the Vault.

prepare <*arguments*>	Prepare media for the selected Vault.
	Arguments for a tape Vault with a mailslot:
	• media name
	• Barcode/ID
	• description
	• storage pool
	• content searching <yes | no>
	• file de-duplication <yes | no>
	• load from mailslot? <yes | no>
	  • if loading from mailslot, mailslot loc
	  • if not loading from mailslot, storage loc
	• prepare media now? <yes | no>
	Arguments for a tape Vault with no mailslot:
	• media name

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Argument	Description
	• Barcode/ID • description • storage pool • content searching • file de-duplication • storage loc • prepare media now? <yes | no> Arguments for a hard disk Vault: • media name • description • storage pool • media size • content searching • file de-duplication • store media in default location? <yes | no> • if not in default location, pathname • prepare media now? <yes | no>
quit	Exit the application.
reload <*arguments*>	Reload media for the selected Vault. Valid arguments: • media name • force reindex of media? <yes | no>
secure <*boolean*>	Secure/unsecure the selected Vault from any media eject or load commands. You must have administrator rights to execute this command. Valid values: • on • off

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Argument	Description
select <*Vault name*>	Select the Vault for operation.
shut <*type of shutdown*>	Close the selected Vault. You must have administrator access to execute this command. Valid values: • extended - Close the Vault after all clients and callbacks have been serviced. Close all open databases. • normal - Close the Vault and all current connections. • restart - Execute a normal shutdown and then restart the Vault. • emergency - Close the Vault immediately.
stat	Display status information of selected Vault.
timeout <*number*>	Set the communication timeout value. Valid values: • 0 - 10 (where "0" is the shortest, "9" is the longest, and "10" is never.)
unload <*arguments*>	Unload media for the selected Vault. Valid arguments: • media name • media tracking? <yes | no> • if keeping track, enter storage location • update the media if needed? <yes | no>
vaults	Display a list of registered Vaults.
vexer <*arguments*>	Run the canned Vault exercises. Valid arguments: • storage pool • scale factor • minimum file size • maximum file size

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Argument	Description
	• maximum sleep time • check file? <yes | no> • stop test on error? <yes | no> • time to run <hh:mm:ss>

Vault Service

The Vault Service (**VaultSvc**) manages the Vault(s) on the network, and runs as a background service. As Vault Service runs, its behavior can be modified with the command line options listed below. You can enter a single argument, a single argument and -usage or -version, or a combination of several arguments and -usage or -version.

The command line is formed as follows:

```
VaultSvc <option> <option> . . .
```

Argument	Description
-instance <*number*>	Define the instance number of the Vault service to be started.
-service_install <*number*> or -service_remove <*number*>	Windows only. Install is for manually installing the service. Remove is for manually removing the service. You can use only one argument at a time. Valid value = service instance number
-usage	List all valid command line arguments for the service.
-version	Display the current version information.
-scan	Cause the VaultSvc to scan the local computer for SCSI devices and display them in the current window. The VaultSvc then terminates.

Configuration File Structure

The Vault configuration file provides the Vault Service with its run time operation parameters. The configuration file is read by the Vault Service at each start. The file is normally created by the Add or Remove Vault Wizard when a new Vault is added. This file is located at <install-dir>/Config/VaultSvc<service instance number>.cfg, where <service instance number> is determined from the invocation line with the -instance command line argument (above).

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Vault configuration files are formatted as follows:

```
policy_name="<Vault name>"
[
    <token>=<value>
    <token>=<value>
    . . .
]
```

Token/Value Pairs

A token is a configuration file attribute that gives a value to determines how the service is run.

Token	Value
act_log_enable = <*boolean*>	Enable activity logging. When enabled, all jobs, retrievals, loads, ejections, startups, and shutdowns are written to the activity log. Valid values = true | false Default = false
act_log_max_size_mb = <*number*>	The maximum size in bytes of the activity log. Default = 50 (bytes)
act_log_pn = "<*pathname*>"	The location of the activity log. Default = </usr/local/Phoenix>/Logs/VaultSvcActivity1.log
act_log_recycle = <*boolean*>	Write new events at the beginning of the activity log file when the maximum size is reached. Valid values = true | false Default = false
active = <*boolean*>	Specify if the Vault should be started. Valid values = true | false Default = true
admin_req_cmd = "<*command string*>"	If not blank, this command is executed any time offline media needs to be mounted. It may be used to execute a shell script or executable that performs an activity any time a Vault requires manual intervention.

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Token	Value
	The command is executed with arguments as follows: <command string> <host_name> <media_name> <media_storage_location> • host_name = the name of the client machine needing access to the media • media_name = the name of the media • media_storage_location = the location specified when the media was originally taken offline. Default = "" (empty)
background = <*boolean*>	For diagnostic purposes, to debug the process. Valid values = true | false Default = true
block_size_b = <*number*>	The block size in bytes used when writing to tapes. A value of 0 (zero) indicates that a default value supplied by the host operating system is used. Default = 0
cache_size_mb = <*number*>	The amount of memory in megabytes allocated for the temporary storage of incoming data. Default = 10
cgr_id_string = "<SCSI device ID string> "	The SCSI library device or stand alone drive to be managed by the Vault. This option is only valid for data tape library Vaults and stand alone tape drive Vaults. The SCSI device ID string is composed as follows: "<Manufacturer><Product ID><Serial Number>". Default=""
console_pn = "<*pathname*>"	The path to the file where all console activity is written. Default = "/dev/console"
db_max_files_open = <*number*>	The number of database files that can open simultaneously. There is one database file per

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Token	Value
	volume. As database files stay open, the service accesses the database files faster without extensive file opening. Default = 100
db_max_mem_mb = <*number*>	Limit how much virtual memory in megabytes the database uses. For best Information Repository performance, select a value that does not exceed 75% of physical memory on the computer. Default = 1024 (1 GB)
db_opt_tod = <*mm:hh*>	The time the database is optimized daily. Default = 00:00 (midnight)
db_pn = "<*pathname*>"	The path to the folder where database files are stored. Ensure files are stored on a local hard disk. Default = "</usr/local/Phoenix>/Database"
diag = <*boolean*>	Run the service in diagnostic mode. All internal activity displays on the local terminal. • **diag** displays the minimum amount of diagnostic information. • **diag_high** displays all diagnostic information. Valid values = true | false Default = false
diag_high = <*boolean*>	
diag_pn = "<*pathname*>"	Redirect any diagnostic output to any file or device at service startup. Default = "/dev/tty"
drive_id_string = "<SCSI device ID string>"	The SCSI tape drive(s) to be managed within a tape library. This option is intended to be used where the SCSI changer/library is unable to provide the correct IDs for its internal tape drives. This option may be specified multiple times for libraries with multiple drives. The first occurrence must be for the first drive with each successive occurrence for each additional drive. The SCSI device ID string is composed as follows:

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Token	Value
	"<Manufacturer><Product ID><Serial Number>". Default=""
email_enable = <*boolean*>	E-mail notification of certain Vault events, such as startup, shutdown, and media load requests. Valid values = true | false Default = false
email_recipient = "<*character string*>"	The e-mail address to where e-mail notifications are sent. Default = "" (empty)
email_server = "<*character string*> "	The name or IP address of the mail server. Default = "" (empty)
error_log = "<*pathname*>"	The path to the error log file. Default = '</usr/local/Phoenix>/Logs/VaultSvc1.log"
fast_index = <*boolean*>	For diagnostic use only. Enable Vault to use on-media database partitions to increase the speed that unknown media is loaded. When "false", every load of an unknown media results in a sequential re-indexing of the entire media. Valid values = true | false Default = true
fs_default_media_dir_pn = "<pathname>"	The default location for a hard disk Vault to store media. Default =</usr/local/Phoenix>/Media
fs_max_dir_ent = <*number*>	The maximum number of files stored in a single directory contained on a unit of hard disk media. This option is valid only for hard disk Vaults. Default = 100
fs_num_virt_drives = <*number*>	The number of concurrent data connections to use at one time. This option is valid only for hard

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Token	Value
	disk Vaults. Default = 10
license_string = "<*character string*>"	The 80 character ASCII text string that is contained within a license file. An empty license string causes the service to run in evaluation mode. Default = "" (empty)
type="vaultsvc"	The type of configuration file. Only valid value = "vaultsvc"
vault_instance = <*number*>	Define the instance number of the Vault service to start. Default = 1
vault_name = "<*character string*>"	The name of the Vault service that runs. %HOSTNAME% and %TYPE% variables can be used instead of a hard coded name. % HOSTNAME% is replaced by the computer name; %TYPE% is replaced by the Vault's type. Default = "%HOSTNAME%_%TYPE%"
vault_type = <*alpha*>	The type of Vault service that runs. Valid values = • HardDisk • SingleTape • TapeLibrary Default = HardDisk
version = "<*number*>"	The version of the configuration file. Valid value = "1.0"
working_cache_pn = "<*pathname*>"	Define the Vault's working cache directory. The working cache directory is the place where the Vault can store temporary items during its normal activities. This working cache is especially important when clipping video files.

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Token	Value
	Default = "</usr/local/Phoenix>/WorkingCache"
working_cache_size_gb = "<*number*>"	The amount of disk space the Vault's working cache may use to store temporary files. On tape Vaults, the working cache should be large enough to hold multiple large video files. Default = 100GB
write_with_verify = <*boolean*>	For diagnostic use only. When set to true, enables the read-after-write check of most tape drives. Setting this to "false" is unadvisable as doing so can cause unreported data corruption. Valid values = true | false Default = true

Sample Vault Configuration File

```
policy_name = "VaultSvc1"
[
    type                    = "vaultsvc"
    version                 = "1.0"
    active                  = true
    vault_name              = "test_HardDisk1"
    vault_instance          = 1
    vault_type              = HardDisk
    db_opt_tod              = 00:00
    db_max_mem_mb           = 1024
    db_max_files_open       = 100
    db_pn                   = "/usr/local/Phoenix/Database"
    fs_default_media_dir_pn = "/usr/local/Phoenix/Media"
    fs_num_virt_drives      = 10
    fs_max_dir_ent          = 100
    cgr_id_string           = ""
    diag                    = false
    diag_high               = false
    diag_pn                 = "/dev/tty"
    act_log_enable          = false
    act_log_recycle         = false
    act_log_max_size_mb     = 50
    act_log_pn              = ""
    email_enable            = false
    email_recipient         = "vault_admin"
    email_server            = "email_server"
    cache_size_mb           = 10
    block_size_b            = 0
    write_with_verify       = true
```

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```
    background              = true
    fast_index              = true
    console_pn              = "/dev/console"
    error_log               = "/usr/local/Phoenix/Logs/VaultSvc.log"
    admin_req_cmd           = ""
    license_string          = ""
    working_cache_pn        = "/usr/local/Phoenix/WorkingCache"
    working_cache_size_gb   = "100"
]
```

Windows Diagnostics

This section pertains to the Windows operating system only.

To open a diagnostics window for Vault Services, you first need to configure Windows Services to allow the Vault Service to interact with the desktop client.

When enabling this feature, a window appears to display Vault activity. If you close this window, it stops the Vault, and Phoenix DEM does not operate without running Vaults.

To configure Vault Services to open a window for diagnostic messages, do the following:

1. Access SoleraTec Vault Service in the Windows Services window. See Start Vaults Manually for directions.
2. Stop the Vault that you want to modify. Right-click **SoleraTec Storage Vault**, and then click **Stop**. The Service Control dialog box appears briefly to display progress.
3. Right-click the **SoleraTec Storage Vault** again, and then select **Properties**. The SoleraTec Storage Vault#x Properties window (#x is the Vault ID number) appears.
4. Click the **Log On** tab.
5. Select the **Allow services to interact with desktop** checkbox.
6. Click **OK**.
7. Start the Vault. Right-click **SoleraTec Storage Vault**, and then click **Start Job**.
8. Close the Windows Services window.

Target and Process Command Line

Run TgtProcCl to execute single, interactive backup or move jobs to ingest data into the Information Repository.

To run single backup or move jobs to ingest data into the Information Repository, ensure that the Phoenix DEM installation folder is in your command path, open a command prompt, and run TgtProcCl at the command line. Depending on what you want to do, append tokens as listed below (under Token/Value Pairs) to the execution path. See Target and Process and Command Line Arguments.

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- Access **TgtProcCl** from your suite of application products.

Default Target & Process List Log

To see job run results and diagnostic information, you can take a look at the Phoenix DEM list log for any given job. Unless you change the settings and path, Phoenix DEM employs the following: %R/Logs/%P.log. You can change this value when running TgtProcCl or in the Target & Process configuration file.

Default Target & Process Error Log

To see if a job had any errors, you can take a look at the Phoenix DEM error log for any given job. Unless you change the settings and path, Phoenix DEM employs the following: %R/Logs/%P.err. You can change this value when running TgtProcCl or in the Target & Process configuration file.

Pathname Variables for Logs

Pathname variables are expressions to define what information is included in your logs.

Variable	Description
%P or %Pn	Policy Name
%H or %Hn	Host Name
%D	Date (yyyy:mm:dd)
%Dy	Year
%Dm	Month
%Dd	Day
%T	Time (hh:mm)
%Th	Hour
%Tm	Minute
%Ts	Second
%R or %Rn	Root Pathname. Valid only at the beginning of a string.

Command Line Options

When you run TgtProcCl, the command line can contain a command line option or token/value pairs. As needed, append tokens as listed below (under Job Token/Value Pairs) to the execution path. The command line is formed as follows:

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```
TgtProcCl <option>
```

Or,

```
TgtProcCl <token>=<value> <token>=<value> . . .
```

To retrieve usage and version information, use the appropriate option below:

- **-usage** - List all valid parameters.
- **-version** - Display the current version information.

Job Token/Value Pairs

Use the following token/value pairs to specify policy information for the job that is going to be run.

Token/Value	Description
act_log_enabled = <*boolean*>	Enable the creation of activity logs. Valid values: true | false Default = false
act_log_pn = "<*pathname*>"	Define the path for the activity log. Supports token substitution. Default path = "%R/Logs/%P.act"
absolute_start = <*yyyy*>/<*mm*> /<*dd*>-<*hh*>:<*mm*>:<*ss*>	The exact start time and date that the job is to run. Multiple absolute start tokens may be entered.[1, 2]
active = <*boolean*>	Define if the policy is active or inactive.[2] Valid values = true | false Default = true
admin_pn = "<*pathname*>"	The directory that contains the log, retry, and history files. Supports token substitution. Default path = "<install-dir>/JobHistory/"
any_user_retrieve = <*boolean*>	Allows any user to retrieve a file in the job, regardless of the initial read access. Valid values = true | false

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	Default = false
backup_data	Internal use only.
backup_stub	Internal use only.
complete = <*boolean*>	Print all summary information plus the path names of the files ingested to the file indicated by the list_pn option. Valid values = true | false Default = false
compress	Internal use only.
create_job_history = <*boolean*>	Create job history files for each job. Valid values = true | false Default = false
data_paths = <*number*>	The maximum number of concurrent files that can be sent. Default = 1
description = "<*character string*>"	A description of the policy.[2] Default = blank
diag = <*boolean*>	Print diagnostic information to the file indicated by the list_pn option. Valid values = true | false Default = false
dir_spec = "<*pathname*>"	Directories to include. Multiple dir_spec options can be specified. The dir_spec check is made for every directory found. This includes the directories contained in the path name list that the job traverses. Default = "*" (any)
display_only = <*boolean*>	Cause job to search for but not store targeted files. List the files that would have been ingested. Valid values = true | false Default = false

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dst_local_only = <*boolean*>	Cause job to use only a Vault local to the computer from where service is running. Valid values = true | false Default = false
dst_media_name = "<*character string*>"	The destination media to be used. If not specified, the first available unit of media is used. Default = "*" (any)
dst_media_speed = "<*character string*>"	The destination media to be used according to media speed. Valid values = • S0 - S10 • Unspecified Default = Unspecified
dst_media_type = "<*character string*>"	The media type to be used for a job. Valid values = • Hdisk – Hard disk • 8mm – Eight-millimeter tape • Dds – Digital data storage • Dlt – Digital linear tape • Ait – Advanced intelligent tape • SuperAit • Vxa - Exabyte Vxa tape • Travan - Travan tape • Lto – Linear tape open • MagOptical – Read/write optical • NullDevice • Unspecified Default = Unspecified
dst_storage_pool = "<*alpha*>"	The name of the destination storage pool. Use "" for no storage pool name.

	Default = "*" (any)
dst_vault_name = "<*character string*>"	The destination Vault name. If not specified, the first available Vault is used. Default = "*" (any)
dst_volume_format	Internal use only.
dst_volume_name	Internal use only.
dst_volume_pack	Internal use only.
dtu_type = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*> or dtu_type = L<*level*>	Ingest files based on time and date or job level. Valid values = • AO (Absolute Old) – Select files with a dtu (date_time_use) equal to or before the specified date. Enter the year as a 4-digit number. • AN (Absolute New) – Select files with a dtu equal to or after the specified date. Enter the year as a 4-digit number. • RO (Relative Old) – Select files with a dtu equal to or before the relative specified date. • RN (Relative New) – Select files with a dtu equal to or after the relative specified date. • L0 – Ingest all files. • L1 – Ingest all data changed since the last L0 job. • L2 – Ingest all data changed since the last L1 job. • L3 – Ingest all data changed since the last L2 job. • L4 – Ingest all data changed since the last L3 job. Default = L0

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error_log = "<*pathname*>"	The path for the error log file. If you specify "/dev/tty", error messages display on the default output device. Supports token substitution. Default path for the configuration file = "R/Logs/%P.err"
exclude_dir_spec = "<*pathname*>"	Omit directories. Accept multiple instances. Default = "" (no directories excluded)
exclude_file_spec = "<*pathname*>"	Omit files. Accept multiple instances. Default = "" (no files excluded)
ext_metadata = "<*command*>"	Extended metadata in a token/value pairs. Token/values can be found in the MetadataExtensions.cfg. Format: token="<command>"token="<command>"... Default = ""
ext_metadata_plugin = "<*character string*>"	Enable the collection of extended metadata. Default = "EmdProcessNone"
file_grouping_plugin = "<*character string*>"	Enable file grouping. Default = "FgProcessNone"
file_spec = "< *pathname*>"	Files to be ingested. This token/value pair can be specified multiple times to include multiple file filters. Default = "*" (any)
follow_links	Internal use only.
host_Id = "<*character string*>"	Where the Target and Process Service runs.[2] Default = blank
include_offline	Internal use only.
job_type = <*alpha*>	Specify the job type. Valid values =

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	• backup • move Default = backup
list_pn = "<*pathname*>"	The filename where all report information is written. Supports token substitution. Default path for the configuration file is "%R/Logs/%P.log"
local_only = <*boolean*>	Specify that the ingested file is to reside on the local computer. Valid values = true | false Default = true
localize = <*boolean*>	All subsequent files in the same job are sent to the same unit of media until it is full. Valid values = true | false Default = true
lock_vault	Internal use only.
obj_type = "<*character string*>"	The policy source. Valid values = • native_fs • mse_pst • mse_msg Default = native_fs
out_of_band = <*boolean*>	Enable the application to constantly monitor its processes and select the network transmission protocol that best suits the files being processed. Valid values = true | false Default = true

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pathname = "<*pathname*>"	The path name that is searched for files matching the options. Files, directories, and wildcard expressions are valid. This token/value pair can be specified multiple times to include multiple paths. No default
pict_gen_preview_image = <*boolean*>	Generate preview image thumbnails at capture/ingest. Valid values = true | false Default = true
pict_preview_image_quality = <*boolean*>	Determine the quality of the preview image. Valid values = High | Medium | Low Default = Medium
pict_process_components = <*boolean*>	Capture/ingest picture files so that they are readable by search applications. Valid values = true | false Default = false
pict_save_preview_image = <*boolean*>	Save a preview image at the path entered in pict_save_preview_image_dir_pn. Valid values = true | false Default = false
pict_save_preview_image_dir_pn = "<*pathname*>"	The path where the copy of the preview image is saved. Default path = ""
policy_name = "<*policy name*>"	The job identifier. No default
post_proc_cmd = "<*command*>"	A post-process command that runs immediately after the job is finished. Supports token substitution. Default = ""
pre_proc_cmd = "<*command*>"	A pre-process command that runs immediately before the job starts. Supports token substitution.

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	Default = ""
process_directories = <*boolean*>	Preserve the state of directories. Valid values = true | false Default = true
ref_id = "<*character string*>"	Internal use only.
repeat_interval = <*hh:mm:ss*>	The amount of time that elapses before a job is repeated.[1, 2] Default = 24:00:00
retry_time = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	The date and time to retry the list of files not ingested. These files match all job criteria but were not sent to the Vault. You must precede the date/time value with an **A** to specify an absolute date and time or an **R** to specify a date and time relative to the end of the job. Enter the absolute year as a four-digit number (for example, 2001, 2002, etc.). Valid values = • A – Absolute date and time. • R – Relative date and time. Default = R0000/00/00-00:00:00 (retry files immediately after the job finishes)
start_days = <*mtwtfss*>	The days the job runs. Use **-** to indicate days the job should not run. For example, if the job is to run on Thursday, you would enter ---t---.[1, 2] Default = mtwtfss
start_time = <*hh:mm:ss*>	The time the job should start for each defined start day in start_days.[1, 2] Default = 00:00:00 (midnight)
stop_time = R<*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<ss>	The date and time the job is to stop. The date and time entered is relative to the start of the job. R = relative to the start of the job.

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	Default = R0000/00/00-00:00:00 (no stop time)
summary = <*boolean*>	Print the start and finish times of the job and the final statistics to the file indicated by the list_pn option. Valid values = true | false Default = true
system_info = <*boolean*>	Ingest system info and other system states. Valid values = true | false Default = false
throttle = <*setting*>	The throttle controls the amount of bandwidth used by jobs (and, the speed files are sent to Vaults). Throttle values are relative to Information Repository capacity and range from 1% to 100%. A lower setting reduces the amount of available bandwidth that is used. Default = 100
timestamp = <*alpha*>	Specify the timestamp of the file that is to be examined when determining if the file meets the dtu_type criteria. • atime - access time • mtime - modified time Default = mtime
type = <*alpha*>	The policy type of the policy file.[2] Default = tap
update_run_record = <*boolean*>	Update the job run record (<install-dir>/JobHistory/run_record.trr) whenever a "level" job runs. Valid values = true | false Default = true
vcs = <*alpha*><*max num files*>	The number of files (F) or number of bytes (S) to ingest per single Vault connection. Valid values =

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	• F – files • S – bytes • 1 - ∞ Default = F500
version = <*number*>	The version number of the policy. The current version is 1.0.[2]
vid_extract_closed_caption = <*boolean*>	Extract closed captioning data from a video at ingest. Valid values = true | false Default = true
vid_gen_low_res_proxy = <*boolean*>	Generate low resolution proxy videos at capture/ingest. Valid values = true | false Default = true
vid_gen_preview_image = <*boolean*>	Generate preview image thumbnails at capture/ingest. Valid values = true | false Default = true
vid_low_res_proxy_quality = <*setting*>	Determine the quality of the low resolution proxy video. Valid values = High | Medium | Low Default = Medium
vid_preview_image_quality=<*setting*>	Determine the quality of the preview image. Valid values = High | Medium | Low Default = Medium
vid_process_components = <*boolean*>	Capture/ingest video files so they are readable by Phoenix DEM search applications. Valid values = true | false Default = false

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vid_save_closed_caption = <*boolean*>	Save a copy of the closed captioning data in a location specified by vid_save_closed_caption_dir_pn. Valid values = true | false Default = false
vid_save_closed_caption_dir_pn = "<*pathname*>"	The path where the closed captioning file is saved. Default path = ""
vid_save_low_res_proxy = <*boolean*>	Save a copy of the low resolution proxy video at the location entered in vid_save_low_res_proxy_dir_pn. Valid values = true | false Default = false
vid_save_low_res_proxy_dir_pn = "<*pathname*>"	The path where the copy of the low resolution proxy video is saved. Default path = ""
vid_save_preview_image = <*boolean*>	Save a preview image at the path entered in vid_save_preview_image_dir_pn. Valid values = true | false Default = false
vid_save_preview_image_dir_pn = "<*pathname*>"	The path where the copy of the preview image is saved. Default path = ""

[1]**Note:** Timing tokens are mutually exclusive. Only one timing token may be set. Set either absolute start, or repeat_interval, or start_days and start_time.

Target and Process Service

The Target and Process Service (TgtProcSvc) is the engine that fuels all data ingest or capture. The Target and Process Service ingests data into the Information Repository by running automated jobs using Target and Process Policies. For TgtProcSvc to execute, a policy must specify everything needed to locate and ingest targeted files. A targeted file is any file that meets all the criteria defined in a policy.

As TgtProcSvc runs, its behavior can be modified with the command line arguments listed below. You can enter a single argument, a single argument and -usage or -version, or a combination of several arguments and -usage or -version.

The command line is formed as follows:

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```
TgtProcSvc <argument> <argument> ...
```

Argument	Description
-admin_pathname "<*pathname*>"	Specify the directory for the job log and run record files. Default = "<install-dir>/Phoenix/JobHistory/"
-config_pathname "<*pathname*>"	Specify a file that contains all job criteria. Default = "<install-dir>/Phoenix/Config/TgtProcSvc.cfg"
-diagnostic <*boolean*>	Run the service in diagnostic mode. Policies and job queues display on the local terminal. Valid values = true | false Default = false
-error_log_pathname "<*pathname*>"	The path for the error log file. Default = "<install-dir>/Phoenix/Logs/TgtProcSvc.log"
-foreground	For diagnostic purposes to debug the process. This option is for UNIX only.
-list_pathname "<*pathname*>"	Specify the file where all verbose information is written. (See "**-verbose**" below.) Default = "/dev/tty"
-service_install <*number*>	Windows only. • Install is for manually installing the service. • Remove is for manually removing the service. You can use only one argument at a time. Default = the service instance number.
-service_remove <*number*>	
-update_interval <*number*>	The configuration update interval in seconds. If you modify the config file during the job, the Information Repository re-reads it. To disable this option, enter 0. Default = 60
-usage	List all valid parameters for the service.

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Argument	Description
-verbose	Print progress information to the path indicated in the **-list_pathname** command (above).
-version	Displays the current version information.

For more information see Target and Process.

Search and Retrieve Command Line

Use SrchRtrvCl to find and retrieve data anywhere in your Information Repository.

To search for and retrieve data in the Information Repository, ensure that the Phoenix DEM installation folder is in your command path, open a command prompt, and run SrchRtrvCl at the command line. As needed, use the commands listed below.

- Access **SrchRtrvCl** from your suite of application products.

Command Line Options

As needed, append the following options to the application execution path. You can enter a single option, a single option and -usage or -version, or a combination of several options and -usage or -version. When you run SrchRtrvCl, the command line is formed as follows:

```
SrchRtrvCl <option> <option> . . .
```

Option	Description
-admin_pn "<*pathname*>"	The path for the directory that contains the Target and Process log files. Default = "<install-dir>/JobHistory/"
-diag -nodiag	Enable or disable the displays of all internal activity on the connected terminal. • -diag enables display • -nodiag disables display Default = -nodiag
-error_log "<*pathname*>"	The path for the error log file. Default = "<install-dir>/SrchRtrv.log"
-out_of_band	Enable or disable out of band transferring.

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Option	Description
-noout_of_band	• -out_of_band enables out of band transferring. • -noout_of_band disables out of band transferring. Default = –out_of_band
-metadata_list_pn "<*pathname*>"	Input file containing metadata to be used as search criteria. The option's <*pathname*> refers to the path where the file is located. There is no limit on the number of files to list. The format of each line is: key="value"[key="value"]<tab><Pathname> [<tab><TimeIn>[<tab><TimeOut>]] Where, key="value" = the metadata being searched for. Multiple key/value pairs can be used in the search. <Pathname> = the pathname where the file is stored to. <TimeIn> = the clip start time for a video file (optional). <TimeOut> = the clip stop time for a video file (optional). <tab> = a tab character used as a field delimiter. If a TimeIn is specified and no TimeOut is specified, then TimeOut is considered to be the end of the video. If TimeIn is specified and the file is not a video, then the behavior is unspecified. All values in all fields are taken as literal. For example, if a quote or space is contained in the pathname, it is taken as part of the pathname. Ex: AssetId="111111" e:/Temp/Test/test.mov 5 45
-retrieve_list_pn "<*pathname*>"	Enable automatic retrieval of listed files. The option's <*pathname*> refers to the path where the file is located. To use this option, you must first have a .txt file that lists all of the files you want retrieved. The .txt file can reside anywhere on your computer, and it should include the FileID of each file to be retrieved followed by a space and the path to where it should be retrieved: *FileID <pathname>* *FileID <pathname>*

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Option	Description
	FileID <pathname> You can find FileIDs in the Target and Process activity log. There is no limit on the number of files to list. The format of each line is: <FileID><tab><Pathname>[<tab><TimeIn> [<tab><TimeOut>]] Where, <FileID> = the file id of the file in the repository (required). <Pathname> = the pathname where the file is stored to (required). <TimeIn> = the clip start time for a video file (optional). <TimeOut> = the clip stop time for a video file (optional). <tab> = a tab character used as a field delimiter. If a TimeIn is specified and no TimeOut is specified, then TimeOut is considered to be the end of the video. If TimeIn is specified and the file is not a video, then the behavior is unspecified. All values in all fields are taken as literal. For example, if a quote or space is contained in the pathname, it is taken as part of the pathname.
-usage	List all valid parameters.
-version	Display the current version information.

Interactive Commands and their Arguments

After starting the application, you can enter the following arguments at the prompt.

Argument	Description
dest <toggle>	Set the destination path for retrieved files. If you specify new, you must also set the opath and npath options, or the npath option only, to reflect the new destination for retrieved files.

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Argument	Description
	Valid values = orig | new • orig - original path • new - new path Default = orig
filter <*pattern*>	Set the current search pattern employed when listing files. Default = * (any)
fs logs	Set the file source for retrieval. • fs logs - Access the Target and Process log files to create a list of files eligible for retrieval. • fs media - Query the Vault to generate a list of files. Use this option when Target and Process log files aren't available. Default = logs
fs media	
h[elp]	Displays a list of valid commands.
ll	List available job log files. • Use the sl command to select a log file. • Use the lf command to list files associated with a Target and Process log file.
lf	List files available for retrieval. To select any number of files for retrieval, enter sf.
lsf	List files selected for retrieval.
logpath "<*pathname*>"	Set the path for job log files. Default = "<install-dir>/JobHistory/"
lsva	Display the name of the currently selected Vault.
lsvo	Display a list of currently selected volumes.
lva	Display a list of available Vaults.
lvo	Display a list of available volumes associated with the selected Vault.

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Argument	Description
mdfile<toggle>	Generate metadata xml files for output along with video. Output can be in the form of a single xml file for all video files, or generate multiple xml files - an output file for each video. Valid values = multi | single<pathname> | off • multi - Output generates multiple xml files (an output file for each video). • single<pathname> - Output generates one xml file for all video files to the pathname entered • off - no output Default = off
npath "<*pathname*>"	Set the new path for retrieved files. Use this command with dest new. • If both npath and opath (below) are specified, the opath entered is replaced with the npath pathname. • If only npath is specified, all files are retrieved in the pathname entered. • If the specified path contains components that do not exist and are not part of the current file set, these directory components are created with the same default ownership and rights as the current process.
opath "<*pathname*>"	Set the original pathname for files that are retrieved. Use this command with dest new and npath. The original file is replaced with the pathname specified with npath (above).
overwrite <*boolean*>	Sets the overwrite policy for retrieved files. Valid values = • on - Always overwrite existing files. • off - Never overwrite existing files. • cond - Overwrite existing files only when the stored copy has been modified more recently than the existing file. Default = off

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Argument	Description
q[uit]	Exit the application.
retrieve	Retrieve selected files.
sall	Select all files for retrieval.
sf <*numbers*>	Select the files associated with <line numbers> for retrieval. Subsequent retrieve commands are based on these selections. Valid values = Any number or range of numbers separated by white space. Separate ranges of numbers with dashes. (ex. 1 2 5 8-12 17 20-25).
sl <*line number*>	Select the job log file associated with the <line number>. Subsequent lf commands are based on the log you select with this option.
status	A summary of the current settings.
sva <*line number*>	Select the Vault associated with <line number>. Subsequent lvo commands are based on the Vault you select with this option.
svo <*line number*>	Select the volume associated with <line number>. Subsequent lf commands are based on the volume you select with this option.
time <*toggle*>	Set the time stamp for retrieved files. Indicate either the original time stamp or the present time. Valid values = • orig - original time stamp. • present - current time. Default = orig

Data Services Command Line

Run DataSvcsCl to execute single, interactive migrate, replicate, and purge jobs in the Information Repository.

To run single migrate, replicate, and purge jobs, ensure that the folder where Phoenix DEM is installed is in your command path, open a command prompt, and run DataSvcsCl at the command line. Depending on what you want to do, append tokens as listed below (under Token/Value Pairs) to the execution path. For more information see Data Services Policies and Command Line Arguments.

- Access **DataSvcsCl** from your suite of application products.

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Default Data Services List Log

To see a job's run results and diagnostic information, look at the Phoenix DEM list log for any given job. Unless you change the settings and path, Phoenix DEM employs the following: %R/Logs/%P.log. You can change this value when running DataSvcsCl or in the Data Services configuration file.

Default Data Services Error Log

To see if a job had any errors, look at the Phoenix DEM error log. Unless you change the settings and path, Phoenix DEM employs the following: %R/Logs/%P.err. This value can be changed when running DataSvcsCl or in the Data Services configuration file.

Pathname Variables for Logs

Pathname variables are expressions to define what information is included in your logs.

Variable	Description
%P or %Pn	Policy Name
%H or %Hn	Host Name
%D	Date (yyyy:mm:dd)
%Dy	Year
%Dm	Month
%Dd	Day
%T	Time (hh:mm)
%Th	Hour
%Tm	Minute
%Ts	Second
%R or %Rn	Root Pathname. Valid only at the beginning of a string.

Command Line Options

When you run DataSvcsCl, the command line can contain a command line option or token/value pairs. As needed, append tokens as listed below (under Job Token/Value Pairs) to the execution path. The command line is formed as follows:

```
DataSvcsCl <option>
```

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To retrieve usage and version information, use the appropriate option below:

- **-usage** - List all valid parameters.
- **-version** - Display the current version information.

Job Token/Value Pairs

Use the following token/value pairs to specify policy information for the job that is going to be run.

Token/Value	Description
absolute_start = <*yyyy*>/<*mm*> /<*dd*>-<*hh*>:<*mm*>:<*ss*>	Used only in the policy file. The exact start time and date that the job is to run. Multiple absolute start tokens may be entered.[1]
active = <*boolean*>	Used only in policy file. Define whether the policy is active or inactive. Valid values = true | false Default = true
complete = <*boolean*>	Print all summary information plus the path names of the files migrated to the file indicated by the list_pn option. Valid values = true | false Default = false
content_filter = "<*character string*> "	A word or phrase in the file to be processed. Default = ""
data_paths = <*number*>	The maximum number of concurrent files permitted to be sent during a job. Default = 1
deleted_files = <*boolean*>	Include files tagged for deletion. Valid values = true | false Default = false
diag = <*boolean*>	Print diagnostic information to the path indicated in the list_pn option. Valid values = true | false Default = false

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Token/Value	Description
dir_spec = "<*pathname*>"	Specify which directories to include. Multiple dir_spec options can be specified. The dir_spec check is made for every directory found. This includes the directories contained in the path name list that the job will traverse. Default = "*" (any)
display_only = <*boolean*>	The job searches for target files without processing them. Lists the files that would have been processed. Valid values = true | false Default = false
dst_media_name = "<*character string*>"	Specify the destination media name. If you don't specify a value in this option, The first available unit of media is used. Default = "*" (any)
dst_media_speed = <*character string*>	Specify the destination media to be used according to media speed. Valid values = • S0 - S10 • Unspecified Default = Unspecified
dst_media_type = <*character string*>	Specify the destination media type to be used. Valid Values = • Hdisk - Hard disk • 8mm - Eight-millimeter tape • Dds - Digital data storage • Dlt - Digital linear tape • Ait - Advanced intelligent tape • SuperAit - Super advanced intelligent tape • Vxa - Exabyte VXA tape • Travan - Travan tape

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Token/Value	Description
	• Lto - Linear tape open • MagOptical - Read/write optical • Unspecified Default = Unspecified
dst_storage_pool = "<*character string*>"	Specify the name of the destination storage pool to be used. Use "" for no storage pool name. Default = "*" (any)
dst_Vault_name = "<*character string*>"	Specify the destination Vault to be used. Default = "*" (any)
dst_volume_format	Currently not supported.
dst_volume_name	Currently not supported.
dt_access = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	Process files based on the accessed date and time. Valid values = • AO (Absolute Old) - Selects files with a dtu (date_time_use) equal to or before the specified date. Enter the year as a 4-digit number. • AN (Absolute New) - Selects files with a dtu equal to or after the specified date. Enter the year as a 4-digit number. • RO (Relative Old) - Selects files with a dtu equal to or before the relative specified date. • RN (Relative New) - Selects files with a dtu equal to or after the relative specified date. • I (Inactive) - Do not use date. Default = I
dt_stored = <*alpha*><*yyyy*>/<*mm*>/<*dd*>-<*hh*>:<*mm*>:<*ss*>	Process files based on the date and time stored on the Vault. Valid values =

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Token/Value	Description
	• AO (Absolute Old) - Selects files with a dtu (date_time_use) equal to or before the specified date. Enter the year as a 4-digit number. • AN (Absolute New) - Selects files with a dtu equal to or after the specified date. Enter the year as a 4-digit number. • RO (Relative Old) - Selects files with a dtu equal to or before the relative specified date. • RN (Relative New) - Selects files with a dtu equal to or after the relative specified date. • I (Inactive) - Do not use date. Default = I
error_log = "<*pathname*>"	Specify the path for the error log file. If you specify "/dev/tty", error messages display on the default output device. Supports token substitution. Default path for the configuration file = "%R/Logs/%P.err" Default path for the command line = "/dev/tty"
exclude_dir_spec = "<*pathname*>"	Omit directories. Accept multiple instances. Default = "" (no directories excluded)
exclude_file_spec = "<*pathname*>"	Omit files. Accept multiple instances. Default = "" (no files excluded)
file_spec = "<*pattern*>"	Set the criteria for files that are to be processed. This token/value pair can be specified multiple times to include multiple file filters. Default = "*" (any)
hostname = "<*host name*>"	Select the files that are to be processed based on the original host name for the file. Default = ""
include_offline = <*boolean*>	Process files from offline media. Valid values = true | false Default = false

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Token/Value	Description
job_type = <*alpha*>	Specify the job type. Valid values = • replicate • migrate • purge Default = migrate
keep = <*boolean*>	Keep a copy of the source files after they have been processed. Valid values = true | false You would use "false" to create a move policy; use "true" to create a replicate policy. Default = false
list_pn = "<*pathname*>"	Specify the file where all report information is written. Supports token substitution. Default path for the policy file = "%R/Logs/%P.log" Default path for the command line = "/dev/tty"
max_file_size = <*number*>	Specify the maximum size in bytes of a source file. The min_file_size and max_file_size options are mutually exclusive. Default = 18446744073709551615
min_file_size = <*number*>	Specify the minimum size in bytes of a source file. The max_file_size and min_file_size options are mutually exclusive. Default = 0 (none)
out_of_band = <*boolean*>	Enable the application to constantly monitor its processes and select the network transmission protocol that best suits the files being processed. Valid values = true | false Default = true

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Token/Value	Description
post_proc_cmd = "<*command*>"	Specify a command that runs immediately after the job is finished. Supports token substitution. Default = ""
pre_proc_cmd = "<*command*>"	Specify a pre-process command that runs immediately before a job starts. Supports token substitution. Default = ""
remove_only = <*boolean*>	Purge the targeted file from the source Vault instead of migrating or replicating it. Valid values = true | false Default = false
repeat_interval = <*hh:ss:mm*>	Used only in the policy file. The amount of time that elapses before a job is repeated.[1] Default = 24:00:00
src_high_water_mark = <*number*>	Specify the maximum percent (%) of media that will be used. If the % used is greater than the entered value, the file is processed. Valid values = 1 - 100 Default = 0
src_low_water_mark = <*number*>	Specify the minimum percent (%) of media used after the high watermark has been reached. If the % of media used is greater than this value and the high watermark has been reached, the file is processed. Valid values = 1 - 100 Default = 0
src_media_name = "<*character string*>"	Specify the source media name. Default = "*" (any)
src_media_speed = <*character string*>	Specify the source media speed. Valid values = • S0 - S10 • Unspecified

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Token/Value	Description
	Default = Unspecified
src_media_type = <*character string*>	Specify the source media type from the file. • Hdisk - Hard disk. • 8mm - Eight-millimeter tape. • Dds - Digital data storage. • Dlt - Digital linear tape. • Ait - Advanced intelligent tape. • SuperAit - Super advanced intelligent tape. • Lto - Linear tape open. • Vxa - Exabyte Vxa tape. • Travan - Travan tape. • MagOptical - Read/write optical. • NullDevice • Unspecified Default = Unspecified
src_storage_pool = "<*character string*>"	Specify the source storage pool. Default = "*" (any)
src_Vault_name = "<*character string*>"	Specify the source Vault. Default = "*" (any)
src_volume_format	Currently not supported.
src_volume_name	Currently not supported.
start_days = <*mtwtfss*>	Used only in the policy file. Specify the days the job is to run. Use **-** to indicate days that job does not run. For example, if the job is to run on Thursday, type ---t---.[1] Default = mtwtfss

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Token/Value	Description
start_time = <*hh:mm:ss*>	Used only in the policy file. Specify the time the job should start for each defined start day in start_days.[1] Default = 0:0:0 (midnight)
stop_time = R<*yyyy*>/<*mm*> /<*dd*>-<*hh*>:<*mm*>:<*ss*>	Used only in the policy file. Specify the date and time the job is to stop. The date and time entered is relative to the start of the job. Default = 0/0/0-0:0:0 (no stop time)
summary = <*boolean*>	Print the start and stop times and final statistics of the job to the file indicated by the list_pn option (above). Valid values = true | false Default = true
throttle = <*number*>	The throttle controls the amount of bandwidth used by jobs (and the speed that files are sent to Vaults). Throttle values are relative to Information Repository capacity and range from 1% to 100%. A lower setting reduces the amount of available bandwidth. Valid values = 1 - 100 Default = 100
type = "<*alpha*>"	The policy type of the policy file. Only "ds" is valid for Data Service policies.
vcs = <alpha><*number*>	Specify the number of files (F) or number of bytes (S) to store per single Vault connection. Valid values = • F - files • S - bytes • 1 - ∞ Default = F500
version = "<*number*>"	The version number of the currently installed command line application. Only the current version number is valid. This number changes with new releases.

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Token/Value	Description
volume_use	Currently not supported.

[1]**Note:** Timing tokens are mutually exclusive. Only one timing token may be set. Set either absolute_start, or repeat_interval, or start_days and start_time.

Data Services Service

The Data Services Service (**DataSvcsSvc**) runs automated migrate, replicate, and purge jobs in the Information Repository using Data Service Policies. For the Data Services Service to execute, Phoenix DEM must have a policy that specifies everything needed to process targeted files. A targeted file is any file that meets all the criteria defined in the policy.

As DataSvcsSvc runs, its behavior can be modified with the command line options listed below. You can enter a single argument, a single argument and -usage or -version, or a combination of several arguments and -usage or -version.

The command line is formed as follows:

```
DataSvcsSvc <argument> <argument> . . .
```

Argument	Description
-config "<*pathname*>"	Specify the file that contains all job criteria. Default = "<install-dir>/Phoenix/Config/DataSvcsSvc.cfg"
-diag	Run the service in diagnostic mode. All internal activity displays on the local terminal. Default = -nodiag
-nodiag	
-diag_pn "<*pathname*>"	The path where all diagnostic information is written. The default path is "/dev/tty"
-error_log "<*pathname*>"	The path for the error log file. The default path is "<install-dir>/Phoenix/Logs/DataSvcsSvc.log"
-foreground	For diagnostic purposes to debug the process. This option is for UNIX only. Default = -background
-background	

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Argument	Description
-list_pn "<*pathname*>"	Specify a path for verbose output. (See "-verbose" below.) Default = "/dev/tty"
-service_install <*number*>	Windows only. • Install is for manually installing the service. • Remove is for manually removing the service. Default = the service instance number.
-service_remove <*number*>	
-update_int <*seconds*>	Specify the configuration update interval. If the -config file is modified during the job session, the Information Repository re-reads it. To disable this option, set the interval to 0. Default = 60
-usage	List all valid parameters.
-verbose	Control whether progress information is printed to the path indicated in the -list_pn command. • **Verbose** - causes progress information to be printed. • **Noverbose** - causes progress information not to be written. Default = -noverbose
-noverbose	
-version	Display the current version information.

Job Scheduling

Job scheduling windows are evident when creating policies; they determine when those policies should run as jobs. The jobs can be scheduled to run on various dates and times.

If you want to save ingested data to a Vault, a Target and Process Policy is necessary to setup. It is recommended to create policies as soon as Phoenix DEM is configured and installed. You do not have to allow a certain amount of time to pass in order to implement policies to optimize storage capacity. To maximize Phoenix DEM's data asset management capabilities, be sure to implement a Data Service Policy to migrate, replicate, or purge data on network Vaults, or to near-line or offline storage devices.

When creating these policies, on the **Scheduling** tab, use the following job scheduling windows to support the policy implementation process.

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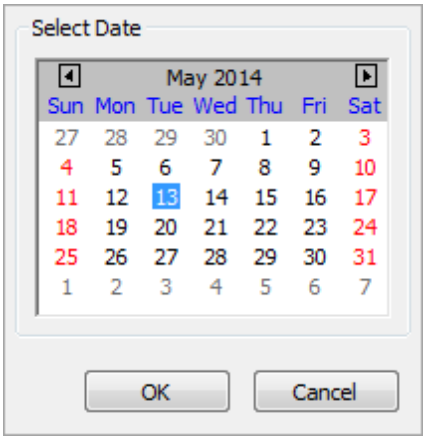
Date window

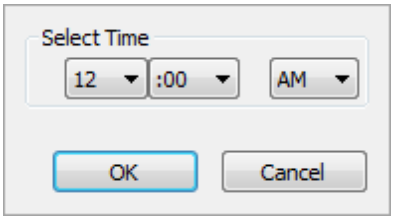
Use to set a date for when your job is to run.



1. Using the arrow buttons by the month and year at the top, set your month and year preference.
2. Click a particular day from the calendar.
3. Click **OK**. (Click **Cancel**, to close the dialog box without saving new or changed parameters.)

Time window

Use to set a time for when your job is to run.



1. From the drop-down lists, select the hour and minutes for your time preference, and then select either AM or PM.
2. Click **OK**. (Click **Cancel**, to close the dialog box without saving new or changed parameters.)

Days window

Use to define on which days of the week a job is to run.

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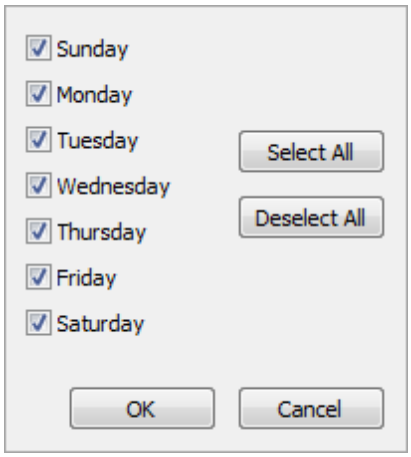
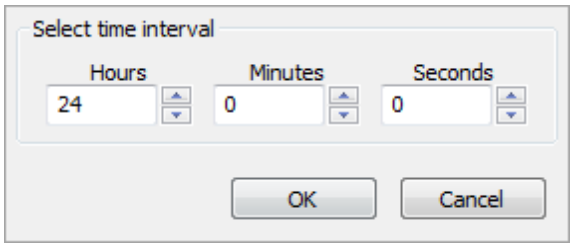


1. Select the day(s) you want the job to run.
2. Click **OK** to save the values to the policy. The selected days appear in the **On what days of the week** text box. (Click **Cancel**, to close the dialog box without saving new or changed parameters.)

Duration window

Use to set a maximum time that a job should be allowed to run.



1. Set the duration using the Hour, Minutes, and Seconds boxes. The job terminates after the duration time is met.
2. Click **OK**. The **Should the job be stopped before it is completed** text box displays the duration of the job before it terminates. (Click **Cancel**, to close the dialog box without saving new or changed parameters.)

Time Interval window

Use to set the time interval to run your jobs at. The job runs at the interval entered until it is changed. To stop a job that is using the repeat setting, edit or delete the policy.

For example, to run a job every three hours, enter 3:00:00; once a day, enter 24:00:00; every two days, enter 48:00:00. If you enter 3:30:30, the job repeats every three hours, thirty minutes, and thirty seconds from the time the policy is saved.

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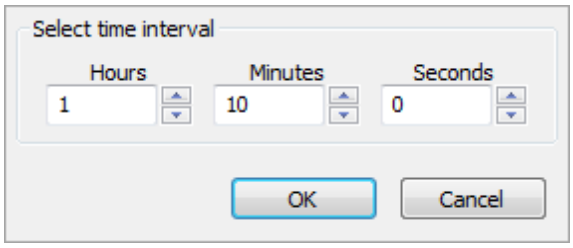
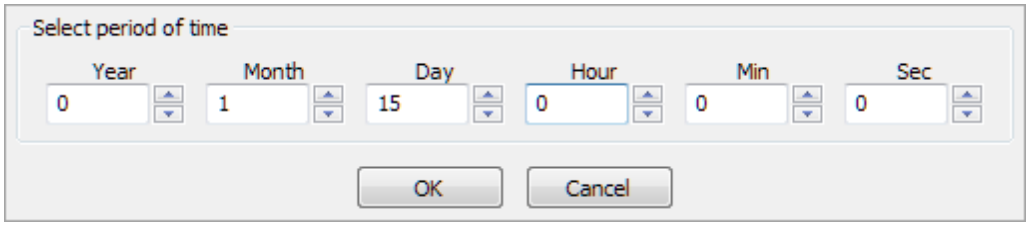


1. Set the time interval for the job to run using the Hours, Minutes, and Seconds boxes. The clock for the interval begins as soon as you save the policy.
2. Click **OK**. (Click **Cancel**, to close the dialog box without saving new or changed parameters.)

Period of Time window

Use to search for files that have been modified within a defined period of time.



1. Enter a period of time in terms of years, months, days, hours, minutes, or seconds. Enter any combination or up to a maximum period of 10 Years, 100 Months, 1000 Days, 100000 Hours, 1000000 Minutes, and 1000000 Seconds.
2. Click **OK**, and the text box where you started from displays the value entered. (Click **Cancel**, to close the dialog box without saving new or changed parameters.)

Troubleshooting

The following are frequently asked questions and common issues that you may come across during the course of using SoleraTec's Phoenix DEM. The categories listed below mention the issues and then discuss the possible causes to lead you towards a resolution. See the appropriate heading for details.

Vault Issues

Issue	Possible Causes
Cannot see my Vaults?	Check that NAS has a static and valid IP address. • Check that multicast routing is enabled if using a smart switch. • Is there a security software blocking multicast?

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Issue	Possible Causes
	• Enable our multicast address - 224.0.23.160, enable traffic, and check your firewall. • Check that local firewall is not blocking any applications. • If the desktop computer has multiple network devices, try disabling them and reboot. • Try using a static IP address on the desktop computer. • Check if application is being blocked by Windows UAC. • If running Vmware, disable Vmware network connections. • Restart the NAS.
My Vault keeps stopping?	• Restart the NAS. • Check that the Vault license is current after Vault is seen.
My Vaults are filling up.	• Watermarks are not set up properly. • In Data Services Policies, on the **Criteria** tab, there are options to order the type of media (like data tape, or optical) or purge dispensable data.
My Vault does not see my data tape drive or data tape library.	• Check the data tape drive and data tape library configurations for your computer; the Add and Remove Vault wizard will not be able to communicate with the device. • Check for connection using the “device manager” for your operating system. • Disable the SCSI connection. Disabling does not affect the software’s use of the device.

Camera Issues

Issue	Possible Causes
My camera connection fails. **I cannot live view the camera.** **I cannot test view the camera.**	• “Live View” must be checked in Camera Configurations to allow access by Live Viewer. • Check that the camera is powered and configured according to manufacturer’s recommendations. • Check that the camera has a valid static IP address configured.

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Issue	Possible Causes
	• Check that the camera is not blocked by a local or remote firewall. • Validate that the camera IP address, manufacturer, model, user name, and password settings are correct in the Camera Configurations. • Validate the RTSP URL using VLC Media Player. 1. Once installed, go to **Start** > **All Programs** > **VideoLAN** > **VLC media player**. 2. In the VLC media player Media menu, select **Open Network Stream**. 3. Type the RTSP URL and click **Play**. Verify a connection. If there is no connection here, check the camera. • Ping the IP address to verify connectivity. 1. Go to **Start** > **All Programs** > **Run**. 2. In the Run window type **cmd**. 3. In the command prompt window, type **ping <camera IP address>**, and wait for a response. If no connection, the camera may be off. • If remotely connected to a computer, video may not play correctly.
All of my camera configurations and recording policies are missing.	• Check that the NAS is running correctly. • Has the NAS been “factory reset” or storage re-initialized? Must recreate configurations. • Were they manually deleted?
My camera is not recording.	• Camera does not exist in Camera Configurations. • Camera is not enabled in Camera Configurations. • Recording policy is not enabled in Camera Policies. • Recording computer selection is not valid in Camera Configurations. • No license. • License is expired. • See resolutions for “Connection fails” above.

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Issue	Possible Causes
	• The NAS has run out of storage.
My cameras do not show up in a camera search.	• Camera is not powered on. • Camera is not connected to network. • Camera is not configured per installation instructions. • Auto discovery is not enabled on camera. • Camera does not support auto discovery. Must enter IP address manually.
My camera video is poor quality.	• Camera is low quality. • Camera is configured to high compression. • Camera is configured to small frame size. • Lighting is insufficient. • Camera is malfunctioning.
How do I install camera drivers?	• Camera drivers are not required.
I removed and replaced my drives, now my cameras are not recording and my video is not playable.	• Vault has marked the drives as being offline. You must reload all media. 1. Open Vault Admin. 2. Expand Media tree item. 3. Right-click on each media and select “Reload Media”.
My camera is not viewable in Live Viewer when using “Remote Desktop” or VNC.	• Video is not always playable through remote connections because of hardware considerations. Try another tool such as “Log Me In”, or “Team Viewer”.
How do I know if my camera is recording?	• Wait 10 minutes and do a video search using “Surveillance Video Manager”. • Check that there are no yellow warning triangles in Camera Policies or Camera Configurations. • Check the LCD panel on the NAS for an error condition. • Check the NAS Web UI for an error condition. • Check the log files (Advanced user only).

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Issue	Possible Causes
Asterisks in the camera list.	• Camera is not active and is ready to be configured.
My applications and camera stop functioning after a change.	• Check network and DHCP settings. Applications may not work if there have been any network or DHCP changes. • Each Vault should be assigned a static IP address. • Check IP network camera connectivity and active status if Camera Policies stop working.
How does my software handle camera connections?	• Video is streamed to the recording server when the camera is scheduled to record. Video is also streamed directly from a camera to any Live Viewer session which is watching that camera.
Not seeing the date and time from the camera manufacturer.	• Log into the camera's management utility to 'enable' the date and time stamp overlay. Phoenix DEM relies on the network IP camera to superimpose the date and time onto the recorded video.
Thumbnails do not generate with my camera.	• Disable the audio setting (if it has audio). Some older cameras do not correctly stream video and audio together.
Forgot camera password on the wizard.	• Check with your camera's user manual for password setting or for resetting the camera.
Video freezes in low light conditions.	• Set the Live Viewer video stream delay value to a larger value to prevent the image from freezing, especially on slow frame rate high definitions cameras. 1. Open Live Viewer 2. Select camera view frame. 3. From the **Tools** menu, select **User Preferences**. 4. From the **Video Stream Delay** drop-down list, select a larger value, such as **700ms** or greater. 5. Click **Save**.

Video Issues

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Issue	Possible Causes
I am running out of NAS storage for video.	• Default Data Service Policy purge named "RemoveOldVideo" has been disabled or deleted. Either enable it or create a new purge policy. • Other NAS applications are using up storage. Install another NAS to store more surveillance video.
My search results thumbnails look like a "fake picture".	• Thumbnails are disabled in recording policy. • Video from camera is not in a supported format.
When I export video, why can't I play it?	• Video format is not supported by your video player. Try VLC. • Video is corrupted from camera.
Cannot see thumbnail or low resolution companion/proxy video.	• Ensure the **Generate low resolution proxy** and **Generate preview image** options are selected In Camera Policies, on the **Processing** tab. • Ensure the **Generate low resolution proxy** and **Generate preview image** options are selected from the Camera Policies window > **Tools** menu > **User Preferences**.
My export procedure does not complete to 100%.	• Ensure you have proper versions of VLC or QuickTime on your computer. When exporting a video segment (or "Clip") that spans a number of video files from storage, one of the final steps in the export procedure is "stitching" the segments together. The Export process gets close to 100%, but then fails.

Search Issues

Issue	Possible Causes
My search results do not populate with video?	• Other search options are selected which do not match any video. Clear all of these selections and search again. • Try closing the application, restarting and then press Search. • The NAS is not running. • The NAS is not properly licensed.

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Issue	Possible Causes
	• A firewall is blocking access to the NAS. • Times on NAS and desktop computers are not synchronized.

The yellow Related Files button does not work all the time in VCM.	1. Open VCM.
	2. In the **Search Results** pane, locate the yellow **Related Files** button in the upper left corner.
	3. Move the mouse pointer over the button to determine if this function is working.
	  • If the mouse pointer changes from an arrow to a finger pointer when hovering over the button – that indicates there are related files associated with the video.
	  • If the pointer does not change, then there are most likely no related files with the video.

Cannot find or add metadata.	• Metadata search options appear only if there is a MetadataExtensions.cfg file in <install directory>\Config. • Ensure that the MetadataExtensions.cfg file is on every computer where it would be modified. • Look in documentation for instructions on creating the needed files.
How do I tell if export extensions are running?	• The extension is a piece of user code that is invoked when exporting files. It could be a shell script, Perl script, compiled program, built in utility or something similar. 1. Develop and debug your script in a standalone environment. Run it from a terminal or command prompt before integrating it with VCM. 2. The script should send logging to the screen or a file. At the least it should log any input parameters to a file so you can see if it is running correctly or at all. 3. Try running a simple alternative program from VCM to see if the framework is set up correctly. It could do something as simple as echoing text to the screen, or touching a file.

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Issue	Possible Causes
	4. Many times problems are path or permission related, especially if the extension script is developed on a different machine than the final target. Make sure your script is in the Phoenix DEM Bin directory and has execute permission. Ensure Perl or Python are installed (if needed), and the path to find them is set up correctly.

Media Issues

Issue	Possible Causes
With SAN or NAS, my media goes offline.	• Your SAN or NAS may have become unavailable. When this happens, the Phoenix DEM media resident on the SAN or NAS are marked as offline. They need to be brought back online using Vault Admin. Right-click on each offline media and select **Reload media**.
With unloaded media, I cannot get back to it or find it.	• Check the default location for the media; it may have changed. • Check for correct paths to media.
My data tape drive is slow.	• Check number of files in throughput. • Check the size of files in throughput. • Check if there is congestion on the network. • Operating system determines the throughput speed.

Network Issues

Issue	Possible Causes
Nothing works after I change my network address.	• You must reboot your desktop computer if it changes networks or addresses.
Nothing works after my computer wakes from sleep mode.	• Disable sleep mode on your computer.

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Issue	Possible Causes
Numbers rather than policies are in Host IDs.	• Check to see if the Locator Service or Services have stopped. • Reboot your computer. • Manually restart the service.
When loading and installing a new version to Apple, it does not update correctly.	• Be sure that files have not been moved since the original installation. If files are moved, the Apple Installer updates those moved files where they currently exist instead of the Phoenix DEM installation folder in Applications. • Try uninstalling the software and installing new copy.
Problems with network connectivity and my Apple laptop.	• Ensure connection to an active network. If laptop is not connected to a LAN, the applications may not function properly.
Live Viewer causes my CPU to respond slowly, or I get a wait screen.	• Check the current system requirements. • Be aware of CPU speed, and disk read/write capacity. • Check network congestion and connectivity.
When searching, it cannot find files that other people see on the same network.	• Check permissions on data.
Can't run on Windows 2000 or older.	• Check the current system requirements.
My Data Service Policies do not run to completion (files are not moved).	• Ensure storage resources are active. • Ensure there is enough storage space available.
Cannot find software when making advanced changes to the registry.	• Check registry for the company name, then the product name. (For example: CompanyXYZ, ProductXYZ)

Error Messages

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Issue	Possible Causes
With recorded video, the error "Unable to retrieve resource" displays.	• Verify the Vault is online; check if powered down, check network connectivity, and check connectivity of the Vaults. • Keep in mind that original video data from a single source may be stored on various Vaults and if those Vaults are not online then the video may generate this error.
As my job runs, the errors "Unable to allocate resources" or "Cannot find Vaults" display.	• Check network connectivity. • Check space availability on media. • Ensure the Locator Service has not stopped. • See troubleshooting entry "Cannot see my Vaults".
"Libraries not available" warning displays when starting applications in Linux	• Libraries that are required for correct Phoenix DEM operation are not installed on your machine. Install the requested libraries shown in the message.
My Vault is shown with a "RPC Error" message in Vault Admin.	• Vault or NAS is not running correctly. Reboot the NAS. • Your desktop network configurations are not correct. • Your NAS network configurations are not correct. • NAS is on a different subnet which is not accessible.
I receive an "Rvt" error when starting any GUI application.	• Local Locator Service is not running. Reboot machine. • Firewall settings are blocking correct network operation. • Windows UAC is blocking correct application operation. • Application was not started from "Start" menu on Windows. • Client software was installed as "For my use only". Re-install for all users.
Where are the system log files for the NAS?	• Look in the Phoenix DEM share. • Log files are best read with WordPad (Windows) or TextEdit (Apple).
The Recording Computer field shows "Not found".	• Check that the NAS is running correctly. • Has the NAS been "factory reset"? Must reselect recording computer.

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Licensing Issues

Issue	Possible Causes
My Product Key or license is not valid.	• May have been activated previously on a different NAS. • Is a demo product key and is now expired. • Cannot move product keys between NAS units.

Log files

Log files are system output files that can help diagnose or track warnings, issues, and problems with the applications. The following provide insight as to what a log file might include. Each log file should be analyzed and treated individually.

LocSvc.log - Reports networking/NIC issues.

DataSvcsSvc.log - Reports problems mainly related to job scheduling of Data Service policies. For example, warnings at startup, no active Vaults, a Vault is not yet registered, or no found jobs to run. When a Vault does start, Data Services Service picks up its jobs to run.

Vault.log - Contains errors, warnings, or informational messages from the VaultSvc. Normally, for every start message you should see a stop message. If there is another start message immediately following the first start message, then the VaultSvc was not properly stopped in its previous run. “CYA” messages are informational messages for Phoenix DEM. There is no loss of data, only a warning that the database had to be rebuilt/re-indexed.

Purge When 80Pct Full.log - Log entries report a summary of the Data Service Job (Purge When 80Pct Full) running. Every Data Service policy that runs produces this file with job information. If there are any errors or warnings, it also creates an “.err” version of the same file.

Manage Services

At times it may be necessary to manually start or stop SoleraTec services. The following sections outline the necessary procedures to perform these tasks.

Depending on the components installed on your machine (i.e. **server** or **client**), not all of these services may be available.

Service Name	Service Description
LocSvc	SoleraTec Locator Service

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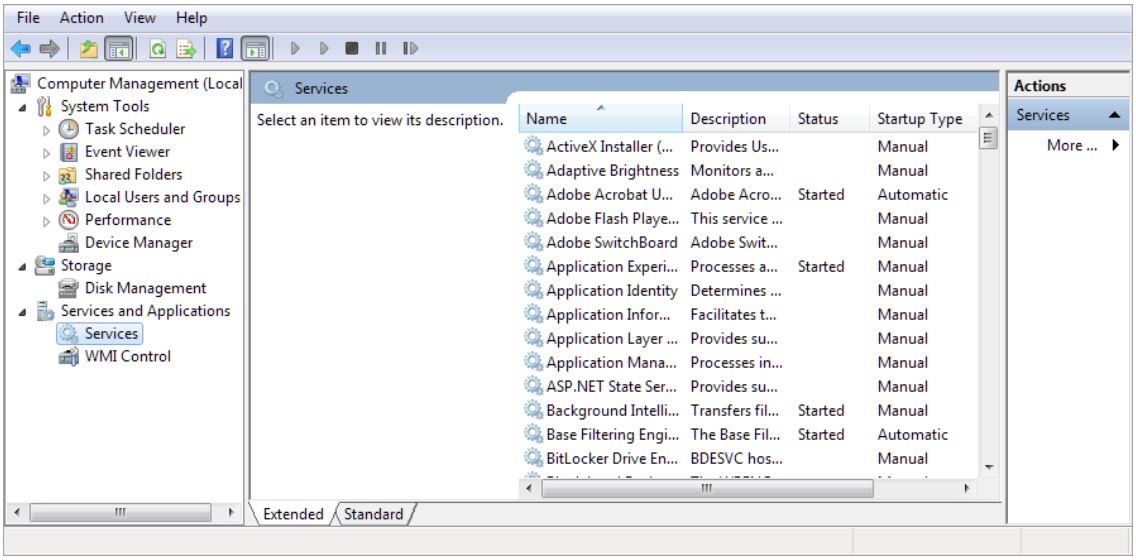
VaultSvc1	SoleraTec Vault Service
VaultSvc2	
VaultSvc3	
VaultSvc4	
TgtProcSvc	SoleraTec Target and Process Service
DataSvcsSvc	SoleraTec Data Services Service

Windows

Use **Windows Services** to **Start** and **Stop** services.

You may need Windows administrator rights for performing certain tasks (administrators have complete and unrestricted access to a computer or domain). General information is provided by Microsoft.

1. Hold the **Windows Logo** key and the **R** key to open the **Run** dialog box.
2. Enter **services.msc** and click **OK**. The **Services** window will open.
3. Scroll down to find the desired Service. For example, SoleraTec Locator Service.



4. Right-click the desired Service, and then select **Start** or **Stop**. If the actions are disabled, check your Windows administrator rights.

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Services will automatically restart when the machine is restarted.

Mac

1. Click **Go**, then choose **Utilities**.
2. Double-click **Terminal**.
3. Enter a command:
    - To **Start** a service: `$ sudo /bin/launchctl load /Library/LaunchDaemons/com.SoleraTec.<Service name>.plist`
    - To **Stop** a service: `$ sudo /bin/launchctl unload /Library/LaunchDaemons/com.SoleraTec.<Service name>.plist`

<Service name> is replaced with one of the following:

Service Name	Service Description
LocSvc	SoleraTec Locator Service
VaultSvc1	SoleraTec Vault Service
VaultSvc2	
VaultSvc3	
VaultSvc4	
TgtProcSvc	SoleraTec Target and Process Service
DataSvcsSvc	SoleraTec Data Services Service

Services will automatically restart when the machine is restarted.

Glossary

A

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ACL - ACL stands for access control list. It is a table that tells a computer operating system the access rights that each user has to a system object, such as a file directory or an individual file. Each object has a security attribute that identifies its access control list. The list has an entry for each system user with access privileges. The most common privileges include the ability to read files, to write files, and to execute the files.

Administrator - Administrators have complete and unrestricted access to a computer or domain.

Automatic fail-over - If there is more than one Vault available, clients can divide their use of the available Vaults. Clients fail-over from the current Vault in use to another Vault, should the current Vault fail.

B

C

CIF - CIF refers to the size of the video in pixels. CIF is a video image 352x288. Other common sizes include QCIF (176x144), 4CIF (704x480), and 16CIF (1408x1152).

Client - Clients provide interfaces for system administrators and end users. With Phoenix DEM's balanced, extended client/server architecture, clients often play roles normally supported by servers. This enables increased Information Repository flexibility, security, robustness and capacity.

Clip Name - Most video editing systems and digital cameras have a machine-assigned file name (such as 123abc_ffx2) for a piece of video. "Clip Name" is a metadata value of a human-assigned name (such as jon_talking) for that video clip. Clip Name is also used by the video editing systems to identify a video. Both the machine-assigned filename and the human-assigned clip name are searchable in Phoenix DEM and therefore are separate search criteria.

Collapsing Data - When data is removed from the primary hard disk storage tier and replaced with a pointer file. A copy of the file exists in the Information Repository and a pointer to the file exists in the computer's file system. Data that is collapsed appears to the networked computer's file system as if it resides locally.

Communications Timeout - If the product is unable to connect with a computer on the network or communications are interrupted during a job, it waits a predefined period of time before completely dropping the connection. This period of time is called the "communications timeout."

Component - A component is a single application or utility that could interact with or have dependencies on other applications. Phoenix DEM software consists of several separate components that work together to protect your files.

CRC - Cyclic redundancy check is used to ensure data integrity by detecting accidental alterations of data during transmission or storage. A unique numeric value is assigned to captured or ingested files, and then an algorithm calculates this value based on data stream, file size, and other characteristics. The CRC value is compared on client and server, and validated.

D

Data Service Policies - These policies are sets of rules which define how the videos or files are duplicated, moved, or deleted across multiple storage devices.

Data Services Service - Data Services Service enforces or implements the Data Service Policies.

Default - A default value or setting used by a device or program when no other value or setting has been specified.

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DHCP - A network configuration protocol used to assign addresses to computers on a network.

Dynamic resource allocation - The process used by Phoenix DEM to find and use storage resources that may be available across multiple storage devices.

E

Embedded Time Display - The time code system that assigns a number to each frame of video, so each frame can be uniquely identified. Time data is coded in digits in the form HH:MM:SS, in the range 00:00:00 to 23:59:59. When available, Phoenix DEM also enables you to view and use other units of measurement, such as frame number.

F

Frames per second (FPS) - Frames per second, is an expression of frame rate. The higher the frame rate, the smoother the video looks.

G

H

Header - In data storage, a header is an area on media where the parameters assigned during preparation of the media are stored. The information contained in the header includes access control lists (ACL), storage pool information, media size, type, etc.

Host - The computer where files originate or where the policy resides.

I

Information Lifecycle Management (ILM) - The policies, processes, practices, and tools used to align the business value of information with the most appropriate and cost-effective IT infrastructure from the time information is conceived through its final disposition. When ILM is video aware, it is called Video Lifecycle Management (VLM).

Information Repository - The Information Repository is where data is stored. Since a Vault is a storage device used to store files, the Information Repository is made up of all the storage devices, clients and Vaults on your network.

Ingesting - The process of using Phoenix DEM clients to archive or move data, including metadata, from a networked computer into the Information Repository.

J

Job Control File - Job Control Files contains a list of files to be ingested and have a file extension of .jcf.

K

L

Label - A label (or media label) is a name assigned to a unit of media. Assigned manually to media, unless a barcode system is available, the labels are used for media identification. If a barcode system is in use, the label name is superseded by the barcode on the media. When media is loaded into a drive, the Information Repository's first task is to read the label to identify and ensure that the proper media unit is being used.

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lic - File extension for a license file. To be seen by the Information Repository, the license file(s) must be in the <install-dir>/Config folder.

Load balancing - Load balancing is the distribution of jobs and data throughout the Information Repository. Phoenix DEM queries each Vault regarding the best match for processing requirements, storage resources, free space, and then establishes a connection to the Vault and copies files to the Vault. The network remains load balanced.

Locator Service - The Locator Service makes dynamic resource allocation possible which delivers unlimited storage resource accessibility within the network. It works as a virtual middle tier to provide information that enables clients and Vaults to work like a traditional client/server system, but without the need for hard-coded static links between clients and servers. In contrast, the Locator architecture is flexible to allow dynamic client access to any storage resource on your network. The Locator maintains a list of currently available product services, by using a multicast and beacon technology, and it provides this list to clients on the network as needed. To accomplish this, the Locator constantly "listens" for active registered vaults. The Locator list notes Vault status and location changes. Every Locator is self-propagating and shares information with other Locators within the Information Repository.

Log file - Error logs are created only when the program encounters a problem. Set the pathname in **Vault Admin** > **Vault Properties** > **logs** to define where error logs are written and stored. An activity log provides logistical information about jobs.

Log file rotation - When a new log file is created (error log or activity log), the older file is renamed and the newer log becomes the primary log file. This is log file rotation. You can specify the maximum file size, maximum number of files to keep, and the interval for how often to check if rotation is needed.

Logging - The ability to create log entries that are associated with a certain video clip. These log entries contain information about a clip such as time in and time out, the user who created it, date and time created, bullet color associated with the clip, and the title and description of the clip

Low-resolution companion/proxy file - Playable video, a fraction of the size of the original video, created when video is captured. This primary video footage remains online and is always teamed with the original source video, even if original is stored near-line or offline. This allows for quick and easy search and play back of video, or seamless video export video to a desktop.

M

Media - Recording media is a device used to store data or information. Examples of media are hard disk, optical disc, and data tapes.

Megapixel (HD) - A megapixel is one million pixels; representing the number of pixels in an image, or the number of elements in a digital display. HD is a type of megapixel camera.

Metadata - Data describing digital content.

Migrate - The process of moving video and files from one storage area to another. This process is managed by the Data Services Service.

N

NAS - Network Attached Storage. Networked computer that provides file-based data storage.

Network Activity - Application used to monitor all data, media, and Vault operations within the Information Repository in real-time.

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O

On-Media Catalog - The metadata catalog, stored on every media unit, that contains metadata for all the files. The on-media catalog is an Information Repository safeguard. Should a Vault catalog become lost or corrupted, the on-media catalogs are used to rebuild it.

P

Physical Media - A physical unit of media, such as a tape, that is independent of its drive. An individual unit of physical media can be used in a single stand-alone drive, or can be one of several units of media within an automated library system. In automated libraries, storage units use robotics to move units of media. With systems based on physical media, there can be one or more drives and several units of media per drive.

POE - Power Over Ethernet is a technology used to power network-connected devices through the network.

Policies - Phoenix DEM employs the use of "policies". They are the method outlined by parameters and options for managing all your digital assets effectively. In Target and Process policies, policies control what files are ingested, where the files are stored in the Information Repository, when jobs run, how often jobs run, when jobs stop, and all other aspects of jobs. In Data Service policies, policies control when files are moved, copied, and purged in the Information Repository.

Purge - The process of deleting video and files from the storage. This process is managed by the Data Services Service.

Q

R

Replicate - The process of copying video and files from one storage area to another. This process is managed by the Data Services Service.

Resolution - Resolution refers to the horizontal and vertical size of video in pixels. The larger the frame size, the larger the picture or video in pixels. Higher resolution is normally equated to better quality video.

S

Server - Unlike servers that require dedicated computers, product servers can run on any of the computers on your network. The server is composed of various components that manage several operations: registration of location with service modules, responding to client queries about resource availability, negotiating connections with client components, receiving data from clients and storing it properly, receiving metadata from clients and updating the Vault, receiving CRC data from clients and using it for media write validation, informing clients of success and failure during processing, informing client components of matches and mismatches of the CRC, on-media data formatting, receiving data lookup requests from clients, locating restore data within the Vault, responding to client requests for data retrieval, and supplying data to clients as required. During installation, the "Server" version refers to the full suite of Phoenix DEM applications, including Vaults. In contrast, the "Client" version does not include Vaults.

Service - A process that runs in the background and performs a specific operation at predefined times or in response to certain events.

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Shadow hard disk Vault - Refers to primary hard disk storage that has been incorporated into the Phoenix DEM Information Repository while remaining primary hard disk storage. This enables you to carry out powerful search and eDiscovery jobs on primary hard disk storage. Creating a shadow hard disk Vault over primary hard disk storage does not affect primary hard disk storage. Primary hard disk storage remains fully accessible. From the perspective of the Information Repository, shadow hard disk Vaults are fully readable but not editable, so you can search for and retrieve data from a shadow hard disk Vault, but you cannot ingest, migrate, or copy policies to move data onto a shadow hard disk Vault.

Source - Refers to the location where data is captured, ingested, or extracted.

Static IP - A network address which does not change. Normally used to refer to the process of manually setting the IP address of network devices.

Storage Pool - One or more pieces of media grouped for a common use. Additional media can be added to storage pools at any time, and searches can be limited to single storage pools with countless units of media, regardless of which Vaults the media resides on.

stx - A file that includes all the video dialog and dialog time codes associated in the video. The .stx file is necessary for searching content in videos, and the name of it matches the video file name.

T

Tab Delimited - A text format that separates between fields using tab characters.

Target and Process Service - This service is responsible for all data ingest or capture.

Thumbnail - A thumbnail is a picture or snap shot in time of a video. Thumbnails are used to help the user get a glimpse of activity in video at specified intervals.

U

V

Vault - A Vault is comprised of a central processing unit (CPU), Phoenix DEM (software), and storage. Each Vault requires its own capacity license because of its scalable possibilities. The Vaults on the network make up the Information Repository to manage all your data storage needs. The Vaults have attributes associated to them like licensing, media, and files, and are easy to upgrade. They are decentralized, making the Information Repository a distributed solution across your network.

Vault Admin - Optional desktop client application used to prepare media and manage media in the Information Repository Vaults.

Vault Service - The Vault service manages the video and storage devices.

Video Lifecycle Management (VLM) - A video aware subset of Information Lifecycle Management, providing a comprehensive approach to managing captured video and its associated metadata.

Video Script - A script or closed captioning format file. We currently support .stx and .srt file extensions.

Virtual Media - Space set aside for use by a Vault on a storage device also used for other purposes. A hard disk is an example of virtual media. Media units on a hard disk are actually file system directories set up by the Vault. Mapping a Vault to an entire hard disk, Virtual hard disk media units enable you to remove removable disks from Vaults just as you would physical media (such as tapes). Virtual media units can span multiple disk drives or be set so that several virtual media units reside on a single disk drive.

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W

Watch Folder - A Watch Folder holds any Job Control Files.

Watermark - Marking video with embedded information to serve as visible identification.

X

Y

Z

2015, 6.7

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